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TRANSPORTATION DISADVANTAGED IN MARYLAND

Maryland Department of State Planning

TRANSPORTATION DISADVANTAGED IN MARYLAND

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September 26, 1977

Dear Reader:

We are pleased to provide you with a copy of the report entitled Transportation Disadvantaged in Maryland. This report has been prepared by the Department's Transportation Planning Section with assistance provided by the Human Resources Section.

The Transportation Disadvantaged report is one element of the Human Services Planning and Coordination Project. It is intended to consolidate information, outline issues and offer alternatives in dealing with the provision of transportation for the disadvantaged in Maryland. It is hoped that the document will not only be a resource for planning but a generator of thought and discussion regarding policies and needed actions to be undertaken by government and the private sector.

Since this document is the first accumulation of information pertaining to this subject on a Statewide basis, we recognize that updating will probably be necessary. We would be interested in hearing your comments and reactions to the report and the issues with which it deals. A greater awareness of special transportation needs in Maryland can only aid in improving the mobility of the State's disadvantaged citizens.

Sincerely,

Vladimir Wahbe

Vladimir Wahbe

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THE TRANSPORTATION DISADVANTAGED IN MARYLAND

General Findings and Conclusions

Existing Conditions

Physical, socioeconomic and environmental constraints on an individual's mobility create a transportation disadvantage by limiting the opportunities available to that person to attain greater material, social, recreational and educational enrichment. Generally, those who are transportation disadvantaged are from rural, elderly, handicapped and poor groups.

Only in the last few years has equal accessibility and mobility for the disadvantaged become an issue of major concern to Federal and State policy and decision makers. Federal agencies and Congress continue to investigate problems and seek solutions for the provision of specialized transportation (restrictive eligibility guidelines exhaustion of demonstration programs, departmental reorganization, regulatory and statutory complications, etc.). But incremental efforts and demonstration projects trickling down to regional and local bodies can be expected to address only a minute portion of the problem. Even with a growing Federal awareness of the problems and the increasing availability of technical aid for use in local planning, a conspicuous lack of overall direction and leadership is demonstrated at the national level.

Information and Research Needs

Difficulties with special need group identification and numeration are prevalent. Continuing and coordinated efforts to refine these procedures are necessary and must involve cooperation at and between all levels of government and the private sector (human services, in particular).

The importance of community level research and data gathering is demonstrated by the fact that it is at this level that detailed information on needs, resources and operational problems is most discernible.

Research must more clearly delineate the relationship between an individual's mobility constraint and the type of transportation solution needed to address it. More explicit determination of the number of target group types, or markets, can then be used to calculate the number and type of vehicles needed as well as overall system characteristics.

Planning, Management and Coordination

It would be useful if central information centers at the Federal, State and local levels were established. Information on need groups, planning resources, management assistance and legislative progress (funding provisions, waiver restrictions) could be generated by these centers. Federal Regional Councils represent logical points within the Federal framework.

Cooperation between the public and private sectors in the provision of specialized transportation is essential if the scope of the overall problem is to be diminished. Active encouragement of private sector participation not only enhances its sustained operation but opens up wider travel opportunities

for the disadvantaged. This becomes particularly important in non-metropolitan areas where private operations such as taxi service, charter bus operation and ambulance service may present the only alternatives to the personal automobile.

With the present state of limited resources, coordination between various human service agencies in providing client transportation and social services becomes essential. A certain measure of autonomy must be overcome if clients are to receive quantitatively more qualitatively better service. Reconciliation of program conflicts and constraints found in Federal and State human service programs is a necessary prerequisite action.

There is an increasing need for more planning and operating expertise in the provision of specialized transportation at the local levels. With much of the responsibility left to the local level, jurisdictions have found themselves ill-prepared to implement and sustain specialized operations without adequately trained personnel, particularly project managers. It would be helpful if the Urban Mass Transportation Administration and the Department of Health, Education and Welfare were to offer special training sessions and workshops dealing with the operation and management of specialized and rural public transit systems.

As demonstrated by several examples across the United States, there is an increasing trend towards 'umbrella coordination' or 'brokerage'. Local social service agencies or transportation authorities are becoming transportation brokers. These bodies coordinate the communities' transportation resources with requests for service. They also obtain and develop additional resources (vehicles, facilities, programs, etc.). Their administrative and operating costs are lower than the costs of all agencies acting individually. Purchase of service agreements cover operational expenses and agencies which formerly expended significant sums of their program funds for transportation have now been able to channel the 'surplus funds' into other program areas. Community transportation or brokerage systems have often evolved as a result of transit development planning.

Depending upon additional pending and proposed legislation, the Urban Mass Transportation Administration's Section 16(b)(2) non-profit organization grant program and the associated non-metropolitan area Transit Development Planning will remain a major contributor to overall planning and coordination for the provision of transportation to elderly and handicapped persons.

Technology

Ample technology exists (with the development of Transbus and advanced design transit vehicles) to adequately meet the transportation problems of the elderly and the handicapped. The prime deterrent to carrying through solutions or implementing programs, in many cases, has been the tremendous cost involved. In other cases, the lack of capable administrative and operational structure is at fault.

The increasing diversity of travel needs to be accommodated indicates that transportation options that fall between the use of the private automobile and conventional transit service will be necessary to provide mobility alternatives to groups and areas that traditionally received inadequate, if any,

public transit service. The study and use of these options will increase in importance as travel needs and travel patterns become more diverse. Paratransit options (taxi, dial-a-ride, jitneys, ride-sharing and pooling, etc.) have great potential for special groups because their unique mobility needs can be dealt with more effectively within these flexible systems and overall costs can be substantially less than in the use of conventional transit.

Additional Findings and Conclusions Significant to Maryland

Existing Conditions

Despite the numerous studies, proposed programs and service alternatives which have been cited, the detailed investigation of providing effective transportation services to mobility-constrained persons in Maryland is still in its infancy stage.

Information and Research Needs

The potential market of the transportation disadvantaged in Maryland is difficult to estimate. Analysis indicates substantial differences between various estimates on a statewide basis. Using data derived from census analysis, a rough measure of slightly over 540,000 elderly, handicapped and elderly-handicapped persons in Maryland is obtained. When economically and geographically disadvantaged persons are considered, this total is sure to increase. Unfortunately, there is no real objective measure of how many persons in Maryland are constrained in their travel behavior or the manner in which they must contend with substandard travel conditions. Therefore, aggregate estimates such as these, while pointing out the problem, cannot be used with confidence in planning. What is needed are small area target group tabulations obtained through local level research, aggregated and then calibrated with overall State assessments and projections.

Planning for elderly and handicapped transportation needs in the State will have to account for changes in demographic trends, especially among the elderly segment of the population which is expected to increase proportionally in coming years. Significant geographic changes will see many of the elderly in suburban and exurban areas with different travel needs and travel patterns as now recognized. Additionally, as the energy situation worsens and travel costs rise, we can expect these conditions to negatively impact the elderly, the poor and the handicapped to a greater degree than the general population.

Planning and Coordination

The Section 16(b)(2) program has prompted many jurisdictions in the State to formally incorporate consideration of the needs of special groups in their transportation planning. This takes place through the Transit Development Planning program in non-urbanized areas and through the Transportation Improvement program in urbanized areas. In non-urbanized areas of the State, in particular, the TDP process is emerging as the most important forum within the formal transportation planning process for the disadvantaged to express their needs. The Transit Development program offers the opportunity for planners,

providers and need groups to work cooperatively in devising workable plans and programs to insure adequate transportation for the disadvantaged, primarily the elderly and handicapped.

There is an increased need to establish clearer, more formal channels of communication between disadvantaged groups, service providers and decision makers, so that meaningful participation by these groups can occur in the various planning processes across the State. Care must be taken by planners to formulate processes and advisory groups which can truly represent the views of the transportation disadvantaged as they participate in transportation and human services planning.

Needed Actions

There is no overall evaluative framework or mechanism in existence in the State which assesses the impact of the many varied efforts being made to improve the mobility of transportation disadvantaged individuals. Strategies for problem-solving still experience scattered application at the local and regional levels and within various Federal categorical programs operated by human service agencies.

It would appear to be necessary that the Maryland Department of Transportation: 1) evaluate its current efforts and programs in the area of transportation for the disadvantaged and 2) investigate additional actions necessary to promote adequate and appropriate transportation for these persons. This should entail:

a. an assessment of the effectiveness of its existing programs in meeting specialized needs (LSS, Rural Demonstration, 16(b)(2), Transit Development Planning, etc.) and wider development of successful features;
b. an examination of the Department's planning relationships with local governments, the social service community and the private sector (especially taxicabs and other PSC licensed common carrier operations) and encouragement of a more formal, cooperative interface in the development of special transportation services;
c. an anticipation of additional responsibilities and relationships emerging as a result of actions at the Federal level (interagency agreements, possible departmental reorganization, relatively new associations with Federal bureaucracies other than the U.S.D.O.T.);
d. increasing the Department's research and technical assistance activity (i.e., applicability of alternative transportation systems; comparative cost analyses of mobility alternatives such as para-transit arrangements, private sector subsidy, etc.; preparation of technical, planning and management guides for use by local governments interested in assembling a community transportation system);
e. determination of the necessity and feasibility of a specialized transportation element in the State Master Transportation Plan;
f. assessment of short and long range capital and operating needs for rural, small urban and specialized transportation systems as they become feasible for development throughout the State and incorporation of scheduled projects in the Consolidated Transportation Plan; and

g. consideration of the importance of alternative transportation systems in enhancing the stability and growth of the State's rural areas.

The role and responsibilities of the Governor's Interagency Committee on Specialized Transportation have heretofore been limited to purview of the Section 16(b)(2) program. The ICST has not developed an overall plan or coordinated all elderly and handicapped activity in the State since the Committee functions without staff or planning resources. As presently constituted, the ICST appears not to possess sufficient resources to plan and coordinate for the multiple developments in elderly and handicapped transportation now occurring, though it would seem a logical body to do so. The intention of the Committee is to solicit and administer non-profit organization transportation grants. However, in light of increased activity and the emergence of additional complex issues* as a result of elderly and handicapped regulations and programs, the ICST should re-examine the duties outlined in its original charge and determine what responsibilities it can most effectively undertake.

*Issues such as overall Section 16(b)(2) project coordination, monitoring of transit development planning, school bus use provisions, increased technical assistance and advice to local governments and non-profit groups, implications of equal accessibility provisions for the handicapped, etc.

PREFACE

Purpose of the Report

This report - Transportation Disadvantaged in Maryland - is an outgrowth of the Department of State Planning's Human Services Planning and Coordination Project (HSP&CP). Initiated in 1973, the HPS&CP is designed as an effort to encourage and facilitate comprehensive human services planning at the State and local levels. This is to be accomplished through the provision of technical assistance and staff support and the development of a common data base for planning. Another focus of the project is to assure coordination among service provider agencies to strengthen the service delivery system and make it more responsive to client needs. Departmental participation on various interagency committees and special studies of problems relating to coordination have been employed as techniques for achieving this goal.

This study has endeavored to gather relevant information and data, discuss cogent issues, outline problem areas and provide possible alternative approaches in hopes of illuminating the topic and creating a more fervent environment for research, action and implementation. It is also an attempt to bring a bit more order and a sense of perspective to what has been an uncoordinated area - transportation for the disadvantaged in Maryland.

Structure of the Report

In the subsequent Findings and Conclusions section, the most important considerations to emerge from the report which could facilitate the improvement of the mobility situation of disadvantaged groups in Maryland are noted. Many are prerequisite actions necessary if a coordinated and comprehensive approach to planning is to be applied in the provision of transportation for the transportation disadvantaged in Maryland.

In the first chapter of the report, the state of being transportation disadvantaged is examined with the affected groups defined and their mobility constraints and travel characteristics noted. In order to clearly understand the problem of being disadvantaged and to plan and develop appropriate solutions, it must be clear what constitutes a constraint on one's movement and how it affects their travel behavior and livelihood.

Chapter II estimates the magnitude and suggests the location of the various transportation disadvantaged in Maryland. The analysis is at best a gross level of estimation given the nature of information available and the lack of consistent data. Currently, it is necessary to use bits and pieces of secondary data, or overlapping primary data where available or employ projections based upon reasonable assumptions.

In Chapter III, an inventory of all existing and currently anticipated efforts which impact the transportation problems of the disadvantaged in Maryland is provided. These include: efforts at the Federal level (i.e., legislation, regulations, special study activity); current or recently completed planning and needs studies in Maryland and current programs and resources available in the

State. Detailed in the latter section are human service agency efforts and common carrier activities in addition to public transportation services.

New directions in programs, policies and technology are discussed in Chapter IV. Many of the developments in these areas hold promise for successful application in Maryland. Potential options and alternatives to increase the mobility of disadvantaged groups in various portions of the State are briefly discussed.

CHAPTER I
THE STATE OF BEING TRANSPORTATION DISADVANTAGED

The mobility afforded by transportation provides an individual access to the productive and meaningful activities associated with employment, social, educational and recreational opportunities. Thus the lack of or restriction upon mobility can adversely affect an individual's quality of life. Constraints on mobility and accessibility create a transportation disadvantage for persons so affected.

The precise nature and conditions which contribute to being transportation disadvantaged are areas that are difficult to define. One can be considered to be mobility constrained when lower than normal trip-making rates are evident.[1] Another view stresses that a transportation disadvantage exists when one's quality and adequacy of transportation service is inferior to that of the general population.[2] Still another position stresses the lack of an automobile as the prime factor in determining whether one is disadvantaged.[3] Obviously, all perspectives on being disadvantaged are related and the determination of such a state may be based upon varying standards. Indeed, the transportation disadvantaged are not a homogeneous group. A discussion of the unique problems and constraints encountered by these persons will better provide an understanding of what it means to be transportation disadvantaged.

Much of the character and opportunity in American life is dictated by the freedom and flexibility of movement facilitated by personal transportation, namely the automobile. Those without an automobile, or the ability to drive one, are at a distinct disadvantage. Where adequate and appropriate public transportation exists, this disadvantage is reduced, provided that the service is adequate, affordable and can be effectively used by the disadvantaged person. While there are significant numbers of persons who depend upon public transit

for their mobility, there are too few systems extensive enough to provide necessary mobility and accessibility opportunities for special-user groups.

Generally, those most affected by a lack of personal transportation and also most heavily dependent upon public transit or other available means for their mobility needs are many (though certainly not all) of the elderly, the handicapped, the poor and the rural.

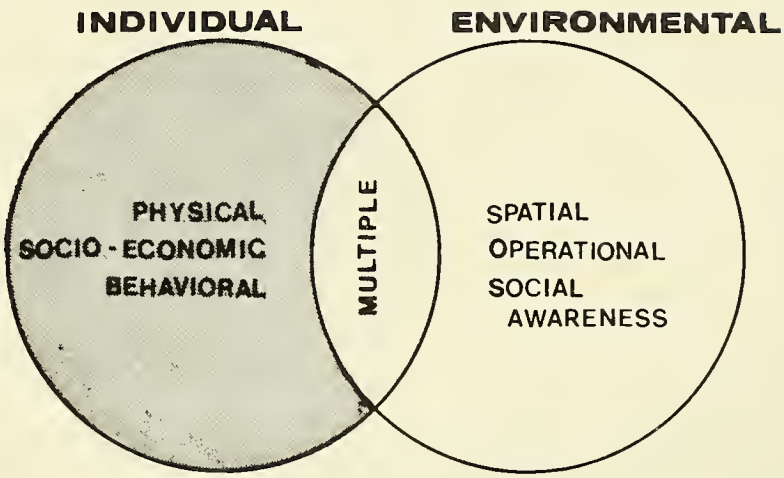
Constraints on Mobility

A constraint on mobility can be caused by a) an individual's unique personal mobility problems: physical, socioeconomic and behavioral factors; b) limitations found in the environment within which the individual must function: spatial, operational, social unawareness factors; or c) a combination of these. Physical restrictions include ambulatory, visual, auditory, mental and motor skills limitation. Socioeconomic restrictions relate to the amount of time and money spent on transportation services and hence are determined by an individual's income level and funds available to expend for transportation services. Behavioral constraints relate to an individual's attitude and perception of the transportation environment. These would include personal fears and apprehensions as well as the ability to use information effectively.

Certain other constraints are inherent to the environment within which the individual must function. Spatial constraints pertain to the inconvenient location of vital services and functions in relation to the disadvantaged and include poor proximity and access to employment, shopping, health, social and recreational facilities. Operational constraints center around an inadequacy of planning, coordination, delivery and evaluation of services and the complexity and cost of providing needed technology. Social unawareness involves a lack of society's recognition and responsiveness to special needs.[4]

FIGURE 1

Types of Constraints on Mobility



In the following section, a general profile is provided of each of the disadvantaged groups noting their special problems and needs. In the process, each of the target groups and their particular constraints shall be noted as an indication of the kind of mobility difficulties which require attention. By necessity, the discussions are general in nature, since it is difficult to generalize for Maryland from the specific findings of numerous research efforts undertaken in a variety of the different settings. Specific expressions of need and travel desires of special groups in Maryland are not presented because reliable data and findings statewide have yet to be obtained.

The Transportation Disadvantaged - The Elderly

Elderly Defined

Defining the elderly and determining their problems and needs according to that definition is not a simple task. Definitions of the elderly vary by age and behavioral characteristics. While the age limit of sixty-five is often used as the demarcation of elderly, chronological age by itself is not a sufficient measure of an individual's mobility capacity. However, given the need to establish some standard benchmark in terms of a functional definition, it is necessary to utilize the commonly accepted age of sixty-five.

An examination of the elderly reveals two categories: the chronologically aged and the impaired aged.[5] The chronologically aged are old according to age measure only and suffer no mobility-restricting physical, emotional, social or economic impairments. The impaired elderly, however, may have hearing and visual impairments, mental and physical disabilities, low incomes and/or other problems which require the special transportation services not readily attainable in the public or private sectors.

Mobility Constraints and the Elderly

As people grow older, their sensory perception is diminished, their reaction time increases and their strength and agility (in general) decline. As their ability to safely and effectively use an automobile lessens, elderly persons must turn to other forms of transportation (e.g., the use of public transit). At a time when sensory and motor capabilities are declining, elderly travelers are often faced with a public transit system which has extensive and complicated visual guides and which has speed as one of its prime criteria for efficiency. Unfortunately, elderly travelers usually move slower than the fast-paced, often-crowded public transit system requires, forcing them to cope with crowding and

pushing; lurching of vehicles and design encumberances such as high entrance steps, overhead grips and fast-acting doors.

Many elderly simply cannot afford to purchase or maintain their own vehicle. Persons sixty-five or over, constitute a large percentage of those found in the very low income categories. According to 1973 national figures, nearly half the older American households had incomes below $4,500 per year, the median annual income for the 65 and over age group. This figure compares with the median annual income of all American households of $10,512.[6]

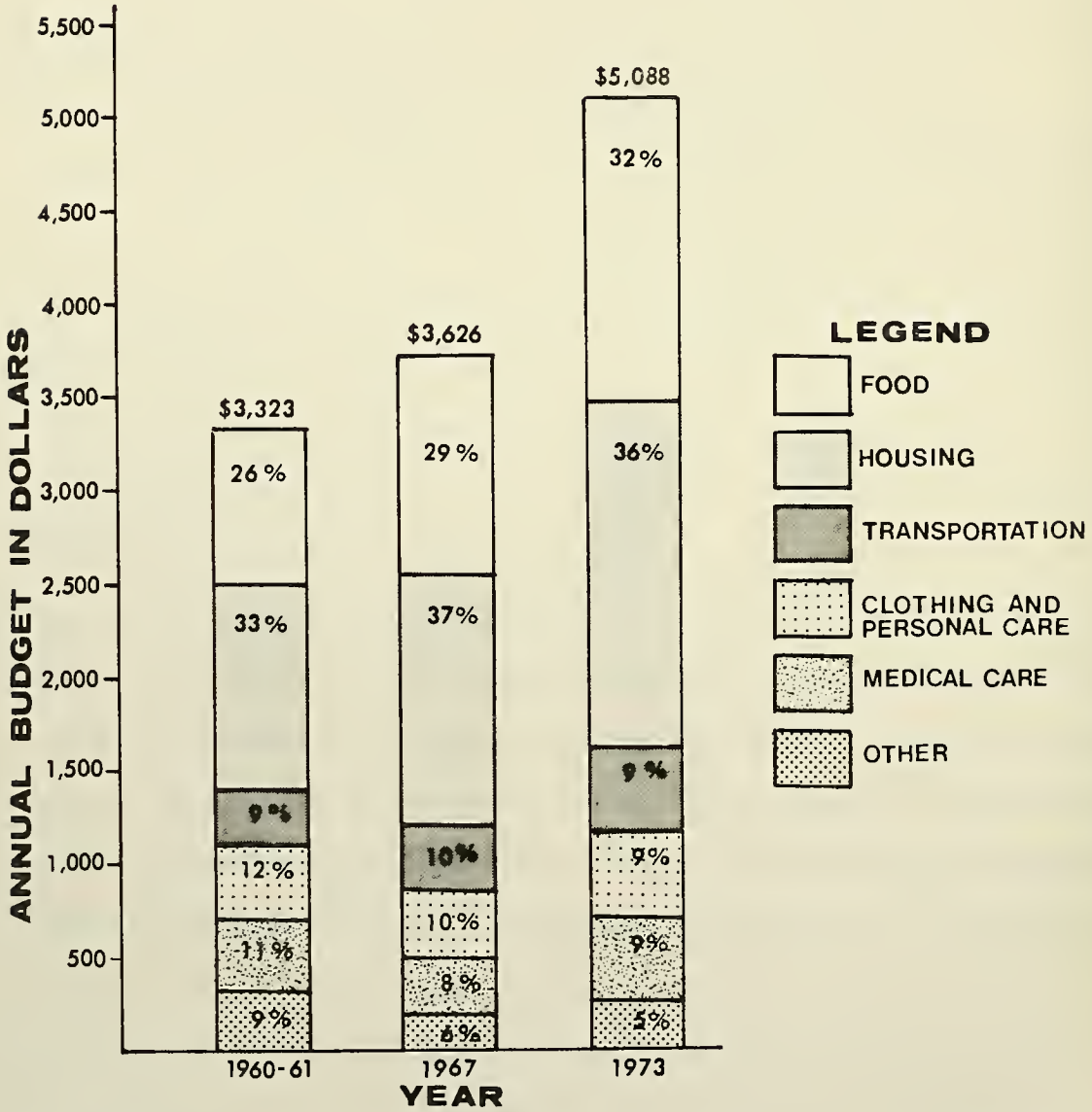
While the percentage of an older person's income expended for transportation purposes has remained relatively constant in recent years (for the urban elderly couple it has remained at 9% - see Figure 2), consumption patterns in the areas of housing and food have been altered by inflation with the result that income formerly expended for socializing activities (education, shopping, health, medical and other) has been directed to cover increased costs for necessary subsistence needs.[7] Consequently, it can be construed that the elderly traveler, while spending the same proportion of income for transportation gets less mobility for the transport dollar, taking most trips for subsistence needs at the expense of social and personal enrichment.

In the absence of a private automobile, many elderly cannot afford frequent use of taxis with their prevailing fare rates. Instead, they must rely on public transit with its physical obstructions and limited geographic coverage. Thus while public transit may be the most affordable mobility alternative for elderly travelers, it is often inconvenient and tends to inhibit their trip-making.

The elderly may be impaired by problems ranging from simple forgetfulness to a mental dysfunction rendering them incapable of independent movement. Millions of persons, many of them elderly, suffer incapacitating mental disa-

FIGURE 2

Percentage Distribution of Family Consumption for an Urban Elderly Couple — Intermediate Budget : 1961, 1967 and 1973



SOURCE: Derived from U.S. Dept. of Labor, Three Budgets for a Retired Couple in the United States, Bulletins Nos. 1507-4, 1507-6.

bilities requiring institutionalization.[8] For those not as severely restricted, their only resources for mobility is public transit or a vehicle operated by another person. In using public transit, the elderly traveler may still experience a fear of crowds, a loss of orientation, a fear of physical attack and robbery or a fear of embarassment (being faced with the condescending attitudes and actions of more mobile travelers towards them).[9]

Compounding these personal mobility problems are a host of environmentally-induced constraints. Location and spatial problems arise from the dispersion of urban activity centers, or in rural areas a concentration of activity centers with a dispersed population without correspondingly appropriate or adequate transportation services. As distance from an activity center increases so does dependence upon the personal automobile.

In urban areas, public transit is primarily designed to service work-related trips via a radial orientation and does not allow for timely and adequate service unless the destination is the central business district. The public transit system many elderly must use is increasingly faced with competition from the automobile. This results in reduction of service, higher fares, the elimination of routes with low patronage and other actions aimed at reducing deficits. These actions frequently have the greatest impact on the elderly. Efforts to provide expensive new technological innovations and special services for elderly and handicapped riders must be considered in light of efforts by the transit agency to keep system deficits within reason.

The elderly often face a situation in which there is no centralized planning or coordination of transportation services to meet their needs. As with many special need groups, however, a major problem is the lack of communication between those who need special transportation services and those who are in a position to provide them.

Travel Characteristics of the Elderly

The factors of low income, inadequate or nonexistent public transportation, dispersed activity centers and physical barriers all contribute to the restriction of the mobility of the elderly

> ...low incomes prevent the purchase of private automobiles or make the increase in transit fares an unbearable burden. Maneuvering or disorientation difficulties on public transit systems may discourage the elderly from supplementing their income with part-time work...[10]

These restrictions combined with natural changes in travel desires result in an alteration of the elderly's travel patterns. Consequently, trip frequency and purpose and the modal choice of the elderly traveler are somewhat different from the rest of the population.

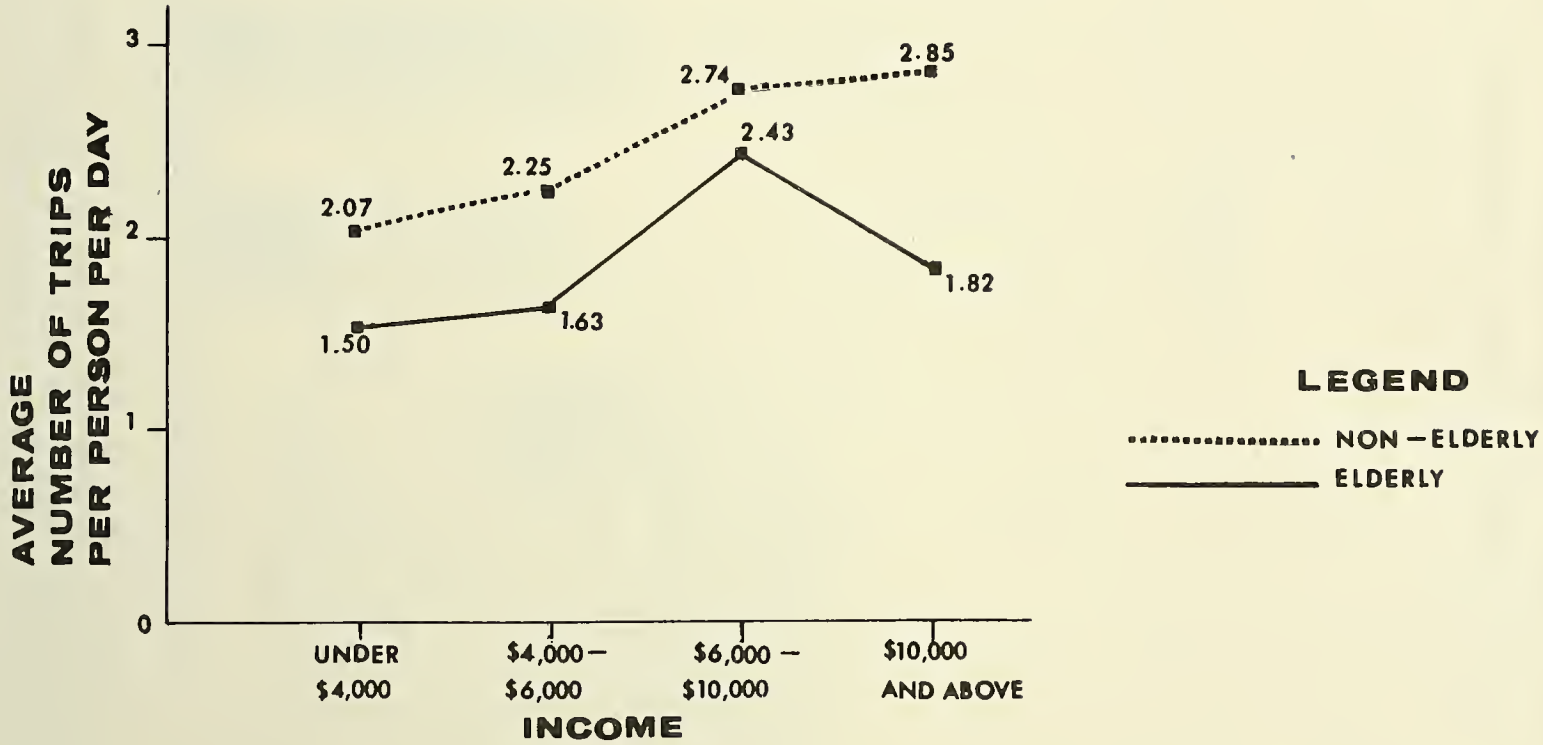
According to a national survey, only 40% of persons 65 or older made at least one daily trip compared with about 74% of those in the 20-64 age bracket.[11] The disparity between trip-making rates is even more noticeable when household income is taken into account (see Figure 3). The reduced level of trip-making by the elderly can be partially attributed to a decrease in the importance of work-related trips (in Maryland, only about 20% of the elderly population is employed).[12] More significantly though, this reduced rate is the result of the types of mobility constraints noted earlier. The elderly are likely to travel during the off-peak hours. Their travel frequency drops off noticeably after 7 P.M.[13] Often, trips made as a matter of necessity are health-related and those made by choice are recreational or social. The importance of mobility to socializing is underscored by the following observation:

> ...without mobility, socializing is impossible and without social activities, elderly Americans are thrust into isolation, feel they are no longer useful, and that they are just "marking time." It can hardly come as a surprise that not only is the quality of life affected, but also longevity.[14]

While the elderly's dependence upon the personal automobile is still great, mobility constraints often necessitate the use of other modes. In a comparison

FIGURE 3

Average Number of Trips Per Person Per Day by Income and Age Group for SMSA Residents [1]



SOURCE: Derived from Nationwide Personal Transportation Survey, 1969-1970 as reported in Abt Associates, Inc.: Transportation Needs of the Handicapped.

[1]Sample size: 5,187 persons.

with younger age groups, it is clear that the elderly drive or use automobiles less often (see Figure 4). As a result, they are more often automobile passengers, relying on friends and family for transportation or they utilize a taxi service. Of those who do own automobiles, many own less reliable older models.[15] While elderly drivers are somewhat constrained by physical problems that are the result of onsetting age, they must also contend with institutional difficulties such as obtaining or retaining insurance coverage.[16]

From a geographic standpoint, national fitures indicate that the rural elderly are more auto-dependent thatn the urban elderly. In areas of over 5000 population, public transportation accounts for 11% of the total trips made by the elderly, while only 4% of the total rural elderly trips were made via public transit.[17] Undoubtedly, much of this disparity can be attributed to the inadequacy or the lack of public transportation in rural areas.

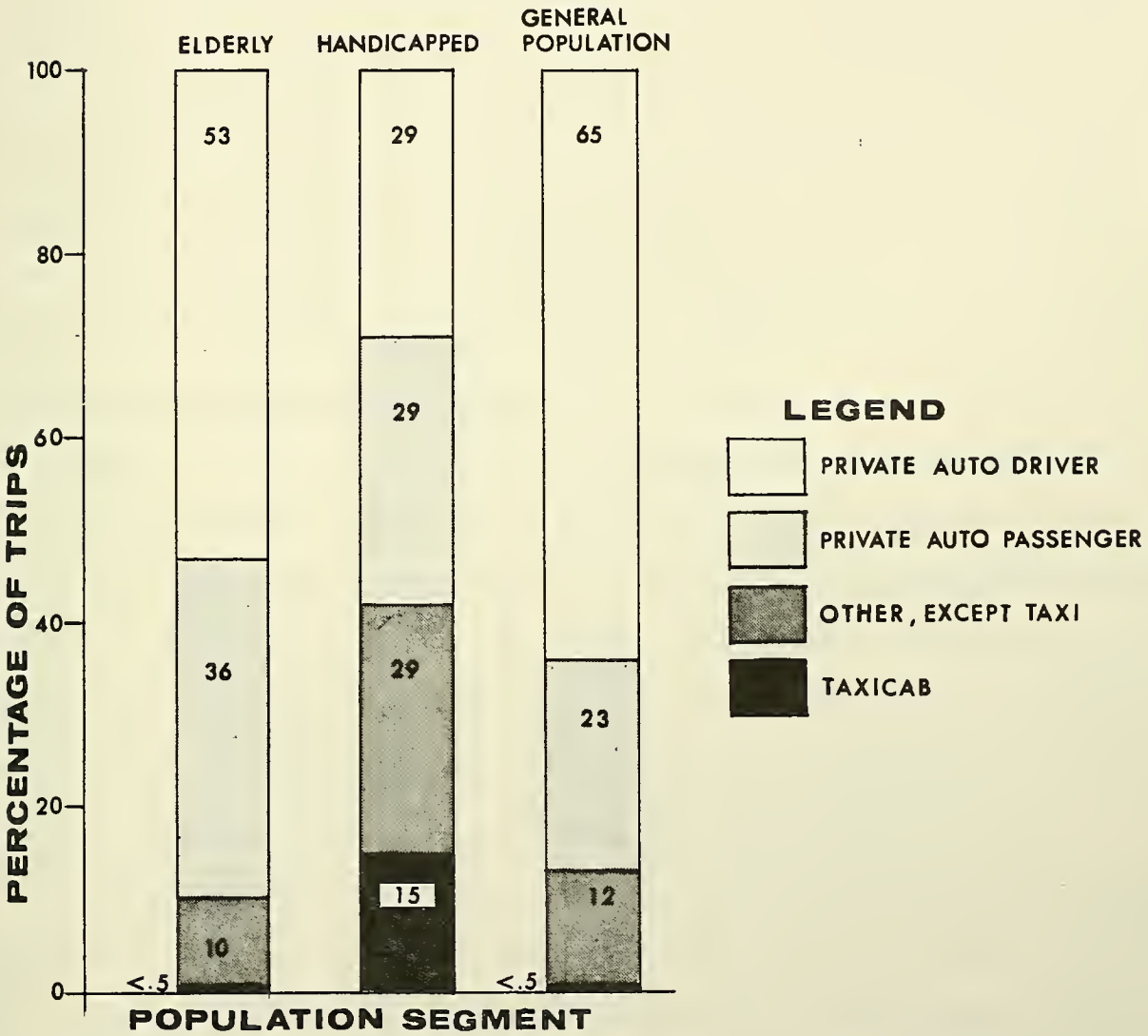
A Baltimore City survey indicated that elderly travelers are more concerned with the safety, reliability, accessibility and frequency of transit service than they are with the speed of service or the total travel time involved.[18] The elderly traveler does not like to wait for public transportation nor walk to a public transit stop because of safety and health reasons. Elderly travelers when faced with having to use public transportation, have indicated a preference for inexpensive and flexible systems with characteristics of easy vehicle entrance and exit, the opportunity to sit down and the ability to travel without transfering.[19]

The Transportation Disadvantaged - The Handicapped

In studying the handicapped, several factors require consideration. One is in defining "handicapped." A variety of definitions have evolved to describe the handicapped. When the Urban Mass Transportation Act of 1964, as amended,

FIGURE 4

Percent Distribution of Trips by Mode of Transportation for the Elderly, Handicapped and General Population



SOURCE: Derived from information supplied by: Maryland Department of Transportation Socio-Economic Group: "Nationwide Personal Transportation Needs Survey: 1969-1970," Bureau of the Census and Federal Highway Administration; and from "Transportation Needs of the Handicapped," Abt Associates, Inc., U.S.D.O.T., Cambridge, Mass., August 1969.

established as national policy the provision of equal access to public mass transportation for the elderly and handicapped, a handicapped individual was described as: "any individual who by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity or disability is unable, without special facilities or special planning or design to utilize mass transportation facilities as persons who are not so affected.[20]

Another problem is determining how the handicapp affects personal mobility. The degree of an individual's handicap is important in determining not only his ability to effectively use transit but the degree of specialized service he may require. The more dependent the individual, the more specialized the service required, and the more specialized the service, the more costly it is to provide. Given the great variety of disabilities prevalent, it would be difficult for any service provider to develop a standardized solution.

Still another is grappling with the fact that overlapping and multiple constraints may restrict an individual's mobility. The fact that some people have multiple problems requires a multi-faceted approach to their transportation problems. The handicapped individual may be subject to one or more of the following limitations: ambulatory, visual, auditory, motor and mental.[21] These limitations may be grouped in a variety of ways in order to ascertain the degree of mobility. A 1975 Maryland Department of Transportation (MDOT) analysis outlined four areas: invalids (those confined to bed); non-ambulatory (confined to a wheelchair); semi-ambulatory (able to walk with supportive devices such as crutches and canes); and ambulatory (handicapped though able to walk).[22] Other classification schemes have been developed which correspond to eligibility criteria for programs offered by social service agencies. One identification scheme is constructed solely in terms of transit compatibility:[23]

a. ambulatory - a person can get to and from the bus stop and board a regular transit vehicle with little or no help;

b. transit limited - one who can board a regular transit vehicle but who would have difficulty making a lengthy journey to the bus stop;

c. transit restricted - one who would need special lift or ramp equipment even if door to door service was provided.

The proliferation of definitions and concommitant classification schemes makes it difficult to determine the exact numbers of affected individuals and hence increases the difficulty of providing effective service to an identified target population. Estimates have been developed both nationally and within the State which are intended to aid transportation and social service agencies in their attempts to deliver services. These will be discussed in a later chapter.

Mobility Constraints and the Handicapped

The major transportation problem of the handicapped, like the elderly, lies in their inability to find a convenient mode of transportation which does not cause them physical discomfort or mental frustration.[24] To the handicapped, accessible transportation can be the difference between a productive, meaningful existence and mere subsistence. Mobility allows the handicapped individual the opportunity to pursue meaningful activities, which is one important element in the effort to remove the societal stigma of the handicapped.

The handicapped would prefer to utilize the automobile as their major mode of vehicular travel.[25] Though the automobile is preferred for its convenience, accessibility and reliability, most handicapped cannot afford to own or physically operate one. In Maryland, for example, the State Motor Vehicle Administration (MVA) listed only about 2000 handicapped drivers (those persons with emphysema, limited visual acuity, minus a limb or limbs, restricted to a wheelchair, or

forced to use mechanical ambulatory devices) who had received licensed tags denoting driver handicap.[26] Figure 5 illustrates the number of elderly and handicapped drivers in relation to the general public.

The handicapped are more willing (when physically able) to utilize public transportation for their mobility needs than the general population.[27] When using public transportation, the handicapped face many of the same mobility constraints as the elderly. Those handicapped who are ambulatory still encounter difficulties in getting to transit facilities. Approaching a transit vehicle they must contend with high entrance steps. Once on a vehicle, lack of maneuverability, difficulty in seating or unseating themselves, activation of a departure signal or the gripping of an overhead stanchion become problems. Adding to these onboard difficulties is the element of vehicle motion with sudden stops and starts and the resultant effect on balance. These difficulties limit the use of public transit by the handicapped to only the most necessary situations. The more handicapped the individual, whether employed or unemployed, the less likely he is to ride a public transit vehicle. To accommodate the most severely disabled, and the non-ambulatory, it is evident that a specialized transportation system is essential.

The physical and vehicular impediments discussed above limit the handicapped in their ability to obtain suitable employment although physically, they may not be prevented from working. This lack of transportation can negatively affect the handicapped individual's income potential serving to further reduce his contribution as a productive member of society.

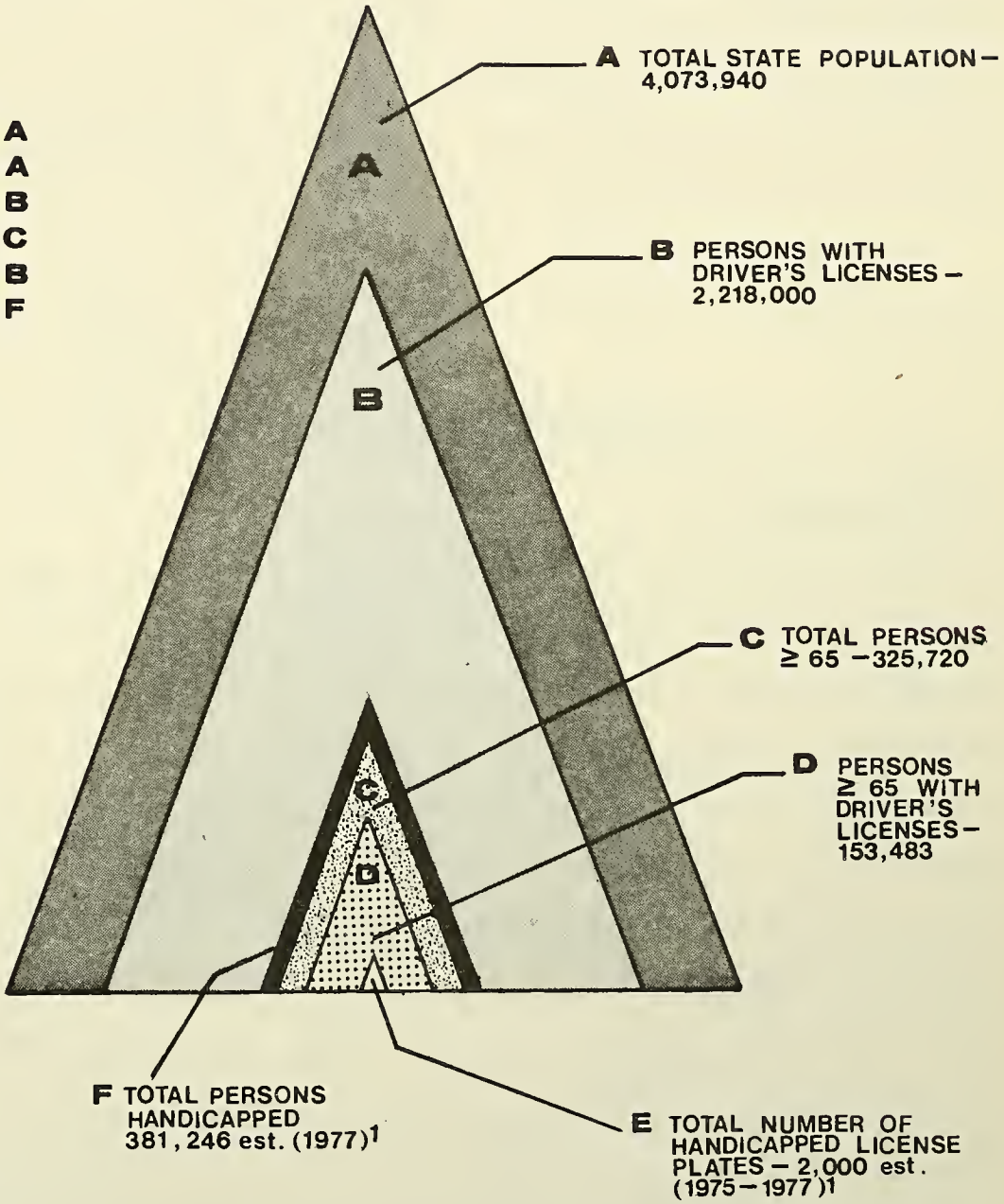
Travel Characteristics of the Handicapped

Research shows that the handicapped travel about 1/3 to 1/2 as much as the general population with a distinct lack of employment-related trips evident.[28] While both the elderly and the handicapped tend to travel for social, recrea-

FIGURE 5
Elderly, Handicapped and Driver's License Registration in Maryland – 1973[1]

NOTES

B IS 54% OF A
C IS 8% OF A
D IS 7% OF B
D IS 47% OF C
E IS .056% OF B
E IS .52% OF F



SOURCE: Maryland Department of State Planning from information supplied by the State Motor Vehicle Administration and the U.S. Bureau of the Census.

tional and shopping purposes, the handicapped will more often restrict their trips to only the necessary ones, traveling on public transit primarily for medical or health-related purposes.

Analysis indicates that the handicapped often make use of the taxi and so so at a rate substantially greater than that of the general population. Several national studies have noted that the handicapped's use of taxis ranges from 10 to 15% of their total trips compared with 2% for the non-handicapped.[29] Although the handicapped are often less able to afford the relatively high cost of taxi service, they have the greatest need for its door to door service.[30]

As identified in a recent national study, Figure 6 breaks down the percentage distribution of trips taken by the handicapped by mode.

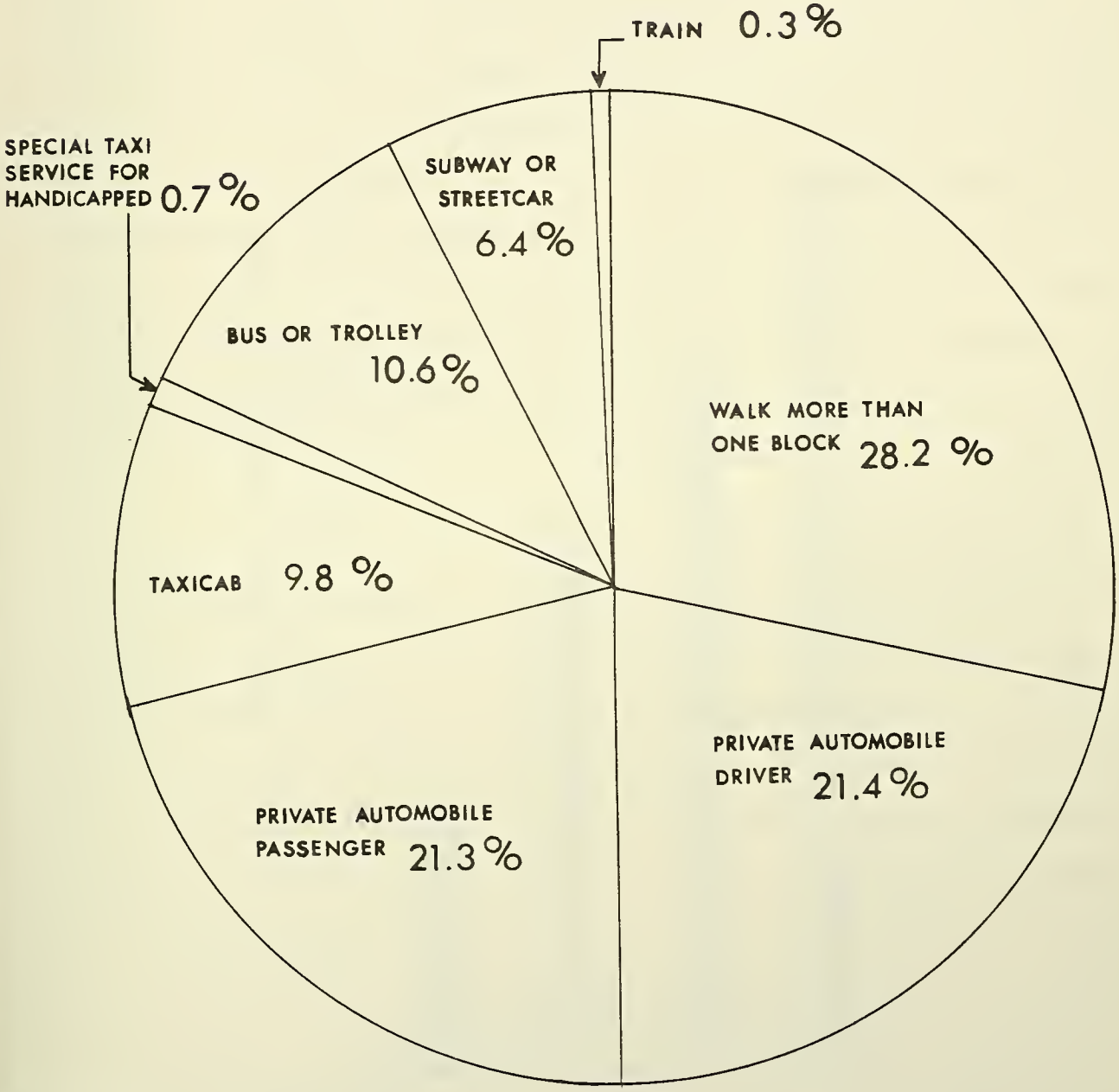
The Transportation Disadvantaged - Poor

The Poor Defined

The poor are one of the more readily identified groups among the transportation disadvantaged. Established income levels serve to differentiate various standards of living. Most recently, an income level of $5938 has been used to differentiate poverty stricken households (family of four) from low income and above households.[31] Data from 1971 indicates that while only 20% of all U.S. households were without an automobile, 46% of those households with annual incomes under $3000 did not own an automobile.[32] Poverty continues to be concentrated in urban areas though it is not solely an urban phenomenon. The movement of large portions of the employment sector to suburban locations, particularly manufacturing-oriented, is of prime concern, given the large concentration of minority workers with limited skills and education who reside in the urban areas but lack transportation to suburban job locations.

FIGURE 6

Percentage Distribution of Sample Trips Made By Handicapped, By Mode of Transportation Used



SOURCE: Derived from, "Transportation Needs of the Handicapped," Abt Associates, Inc., U.S. Dep't of Transportation, Cambridge, Mass., August 1969.

Mobility Constraints on the Poor

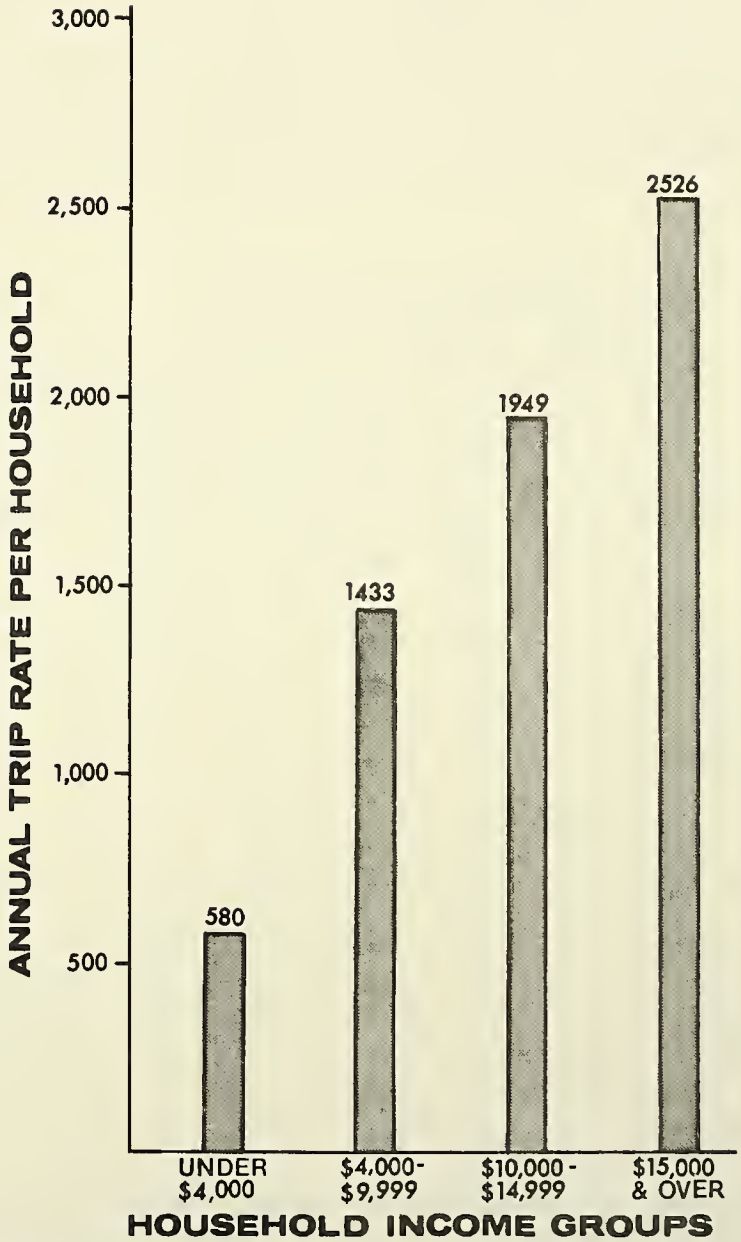
Lack of a sufficient income restricts the indigents' mobility and causes inconvenience in efforts to meet travel needs and desires. The prime mobility need for the poor individual or household is access to better employment opportunities and hence greater social and economic opportunity. While a large percentage of the poor do not own an automobile, many who do, own older models in poor operating condition.[33] Thus, the mere availability of an automobile does not necessarily guarantee mobility. One source noted that "a worker traveling 40 miles roundtrip to work by auto and earning $3000 annually, would spend 40% of his income for that purpose; and 15% at $8000..."[34] Without reliable automobile transportation, the poor are forced to use a public transit system which often does not adequately serve newer, developing areas which can offer employment and housing opportunities.

Travel Characteristics of the Poor

Low incomes correlate with low trip making rates as evidenced in Figure 7. Trip rates for those households with annual incomes of less than $4000 are much lower than for those with higher incomes. Members of autoless households appear to take about one trip less per person per day than do persons with the same income and owning one car. Studies show that the variance is greater in the total number of trips between 0 and 1 care households than between 1 and 2 car households.[35] In larger cities, where public transportation service is more extensive and frequent, the disparity in the trip-making rates between households with and without autos is reduced. In smaller cities and in rural areas, ride sharing and car borrowing by autoless households exists to a much greater degree than in urban areas though not providing the coverage offered by larger transit systems.[36]

FIGURE 7

Annual Passenger Car Trip Rates Per Household by Income



SOURCE: Report No. 7 of the National Personal Transportation Survey, "Household Travel in the United States," Federal Highway Administration, December 1972.

The Transportation Disadvantaged - The Rural

While the transportation disadvantaged rural population may consist of persons of all ages, income levels or physical conditions, a common if not prime constraint, of rural living is geographic or spatial in nature. It involves not only an inadequacy of transportation services, but in some cases, a total lack of available public transportation. The nearly total dependence upon the private automobile is one of the most difficult and complicated transportation issues facing rural areas.

Mobility Constraints and the Disadvantaged Rural Traveler

In rural areas, the population is generally dispersed in relation to activity centers and critical services. The rural resident is primarily dependent upon the automobile for mobility needs. One study notes that "for more than 54 million rural residents, (nearly one quarter of the nation's population) private motor vehicles are the primary source of mobility to work, shopping, medical care, recreation and other services and without them, the isolation resulting from rural distances could not be overcome."[37] When the rural resident is not able to use personal transportation, he must rely upon friends or neighbors for transport. However, "the widespread belief that the rural resident can always call upon neighbors, friends and relatives for aid is claimed by some to be a myth."[38] In rare instances where there is a rural public transportation system in operation, it is usually an infrequent service requiring advance notice of intent of use for specific purposes. As one study notes:

> "...Rural households may now spend relatively more of their income on transportation than do urban households. If inflation and energy problems persist, the ranks of the transportation disadvantaged in rural areas will probably increase. Also, many better off rural households may reduce multiple care ownership, thus limiting the mobility of some family members."[39]

Travel Characteristics of the Disadvantaged Rural Traveler

A common travel characteristic of the rural resident is the shopping trip made to a town or activity center on a weekly or less frequent basis.[40] Transportation to health and medical care stand out most significantly as a requirement of the rural resident for personal well-being. Health facilities and services are often only available in nearby towns or more distant large cities and in the absence of adequate public transportation and without private transportation, the rural resident is left without access to service. It is not surprising that transportation services provided by rural social service agencies are either in connection with travel to their clients or in bringing their clients to their services. By necessity, due to cost, this transportation service must be limited only to medical, dental, nutrition and other social service purposes and frequently does not allow for shopping, recreational or personal activities.

CHAPTER II
MAGNITUDE AND LOCATION OF TRANSPORTATION DISADVANTAGED GROUPS IN MARYLAND

Understanding the limitations on mobility which affect the travel behavior of the transportation disadvantaged is only one step towards attempting to solve their problems. It is essential to know their numbers and location, as well, so that the exact nature and magnitude of the transportation problem can be understood. Knowing the who and the where of the target populations or markets is essential in planning for their needs, assessing the effectiveness of current programs and resources or devising new transportation systems. Much work needs to be done in this area in Maryland, however. Our assessment in the following section is cursory at best and is subject to the varying reliability of data definitions and counts.

Determining the magnitude and location of persons who are transportation disadvantaged varies with the 'identifiability' of their unique characteristics. Age, for example, is well-documented, being recorded by a variety of sources, the foremost being census information. Income differentiation and poverty status are also readily identifiable although these factors are subject to fluctuations caused by broader economic forces and thus the affected group is constantly changing. The State's population can be divided into urban and rural groups based upon density considerations. The most difficult task lies in identifying and locating the handicapped.

Despite the fact that there are many agencies who deal with physically and mentally disabled persons, there is no centralized source of information or aggregate estimate of these persons that gives a consistently reliable indication of their size and location across the State. With the many types of disabilities prevalent, multiple agencies with multiple records exist. Duplication and double-counting can swell the apparent size of the group, while gaps in service

and unidentified individuals can reduce it. A more refined, coordinated research effort must be undertaken to identify and locate these persons if their human service and transportation needs are to be properly planned. Continued research and study is needed to obtain reliable measures of actual transportation disadvantaged persons including an assessment of the numbers of handicapped according to the nature and degree of their mobility handicap. Figure 8 illustrates how various disadvantaged groups overlap.

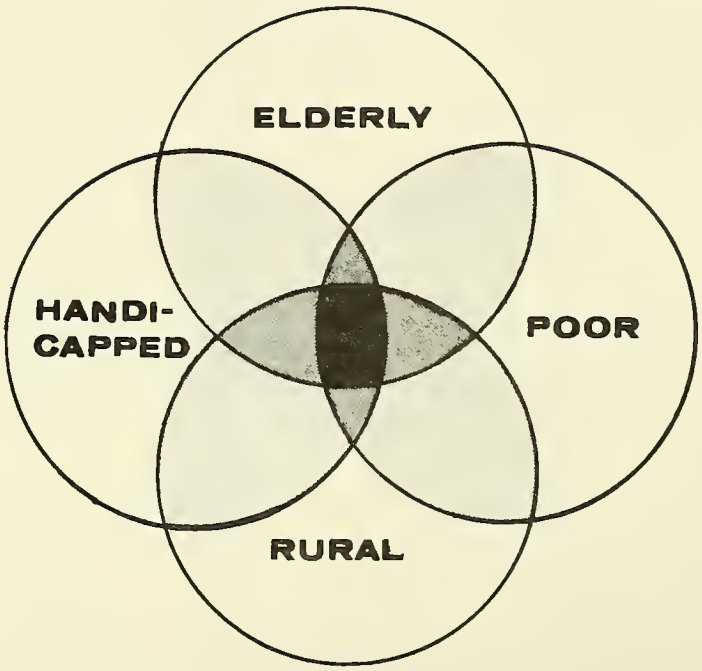
The Magnitude and Location of the Elderly

In 1975, it was estimated that 22,400,000 persons or 10% of the nation's population was sixty-five or older.[41] By 1975, Maryland's elderly population was estimated to have grown to 333,670 or 8% of the total State population.[42] Table 1 illustrates the total number of elderly by county and region within the State. Baltimore City possesses the greatest number of elderly - 93,940, with the urban counties of Baltimore, Montgomery and Prince George's having significant numbers. The Eastern Shore counties and those in the western portion of the State, have the highest proportions of elderly in their populations in the State. The two major metropolitan areas of the State contain nearly 78% of the State's elderly population, while the Western and Eastern Shore regions each comprise roughly 10% of the total. Southern Maryland has slightly over 2% of the State's elderly population (see Figure 9). If trends continue, then the State's elderly population will continue to increase numerically and proportionally in the suburban areas surrounding the large urban centers as well as increasing in the State's rural areas.

Illustrations of the elderly poor are based upon an age of 60 rather than age 65 benchmark. Percentages indicated in Figure 10 were derived from 1975 Bureau of Census poverty figures.[43] According to the analyses of these low

FIGURE 8

Overlapping of Groups Which Experience Mobility Constraints



income figures, the Baltimore Region has the largest percentage of elderly poor in the State (56%), while Western Maryland follows with roughly 15%. The Washington Suburban and Lower Eastern Shore regions both have approximately 10% of the State's elderly poor. The Upper Eastern Shore counties contain about 7% and Southern Maryland about 3% (see Table 2).

The perspective changes somewhat when each region is examined to determine the percentages of elderly poor as part of each region's elderly population. For example, while 9% of the State's elderly poor reside in the Lower Shore region, nearly 20% of all elderly in that region are poor. While Maryland's

Table 1

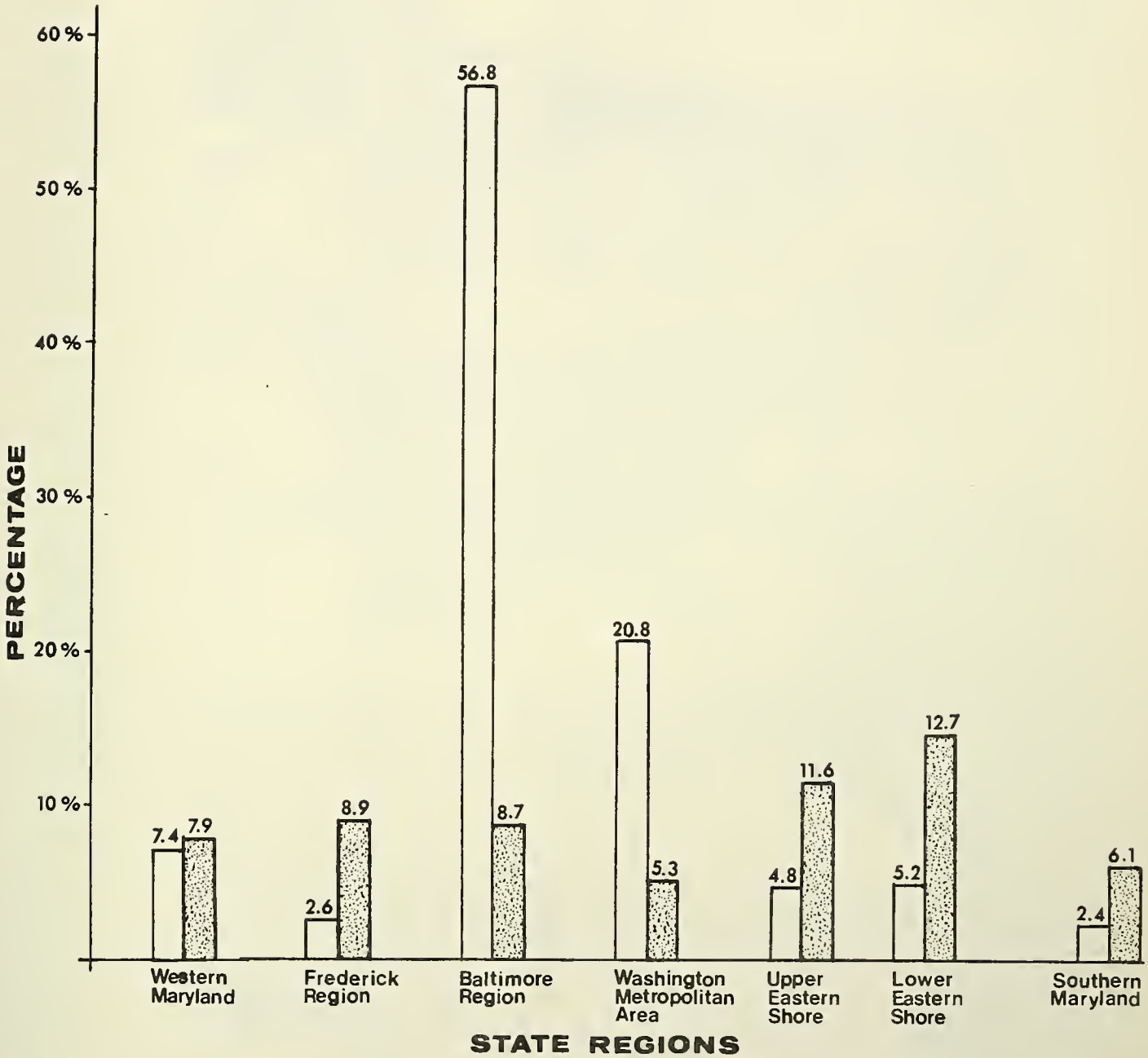
Percentage of Elderly in
Maryland by Region and by County

	1975 Population	As % of Total 1975 Maryland Population	Number of Persons 65+	#65+ as % of Total County or Regional Population	As % of Total State Elderly Population
Western Maryland	308,440	7.4	24,430	7.9	7.4
Allegany	82,790	2.0	10,700	12.9	3.2
Garrett	22,090	.5	2,660	12.0	.8
Washington	108,210	2.6	11,070	10.2	3.3
Frederick	95,350	2.3	8,520	8.9	2.6
Baltimore SMSA	2,165,610	51.7	189,440	8.7	56.8
Anne Arundel	343,670	8.2	19,766	5.7	5.9
Baltimore	660,990	15.8	55,630	8.4	16.7
Carroll	80,380	1.9	7,940	9.9	2.4
Harford	132,970	3.2	7,110	5.3	2.1
Howard	98,850	2.4	5,060	5.1	1.5
Baltimore City	848,750	20.3	93,940	11.1	28.2
Washington Suburban	1,302,500	31.1	69,520	5.3	20.8
Montgomery	591,490	14.1	40,510	6.8	12.1
Prince George's	711,010	17.0	29,010	4.1	8.7
Upper Eastern Shore	139,610	3.3	16,190	11.6	4.8
Caroline	20,620	.5	2,790	13.5	.8
Cecil	56,700	1.4	4,420	7.8	1.3
Kent	16,780	.4	2,330	13.9	.7
Queen Anne's	19,650	.5	2,500	12.7	.8
Talbot	25,860	.6	4,150	16.0	1.2
Lower Eastern Shore	134,410	3.2	17,090	12.7	5.2
Dorchester	29,640	.7	4,250	14.3	1.3
Somerset	19,090	.5	2,850	14.9	.9
Wicomico	57,850	1.4	6,360	11.0	1.9
Worcester	27,830	.7	3,630	13.0	1.1
Southern Maryland	138,060	3.3	8,480	6.1	2.4
Calvert	25,400	.6	2,540	10.0	.8
Charles	59,820	1.4	3,080	5.1	.9
St. Mary's	52,840	1.3	2,860	5.4	.9
State Total	4,188,630	100	333,670	8.0	100

Source: Maryland Population Abstract 1950-1990, Maryland Department of State Planning, Table 18: Historical and Projected Total Population 65 Years Old and Over: 1950-1990, February 1976, p. 37.

FIGURE 9

Percentage Distribution of Elderly in Maryland by Region — 1975



LEGEND

Percentage Elderly by Region as Percentage of Total State Elderly Population

Percentage Elderly by Region as Percentage of Total Population of Region

SOURCE: Derived from Maryland Department of State Planning, Maryland Population Abstract 1950-1990, February 1976.

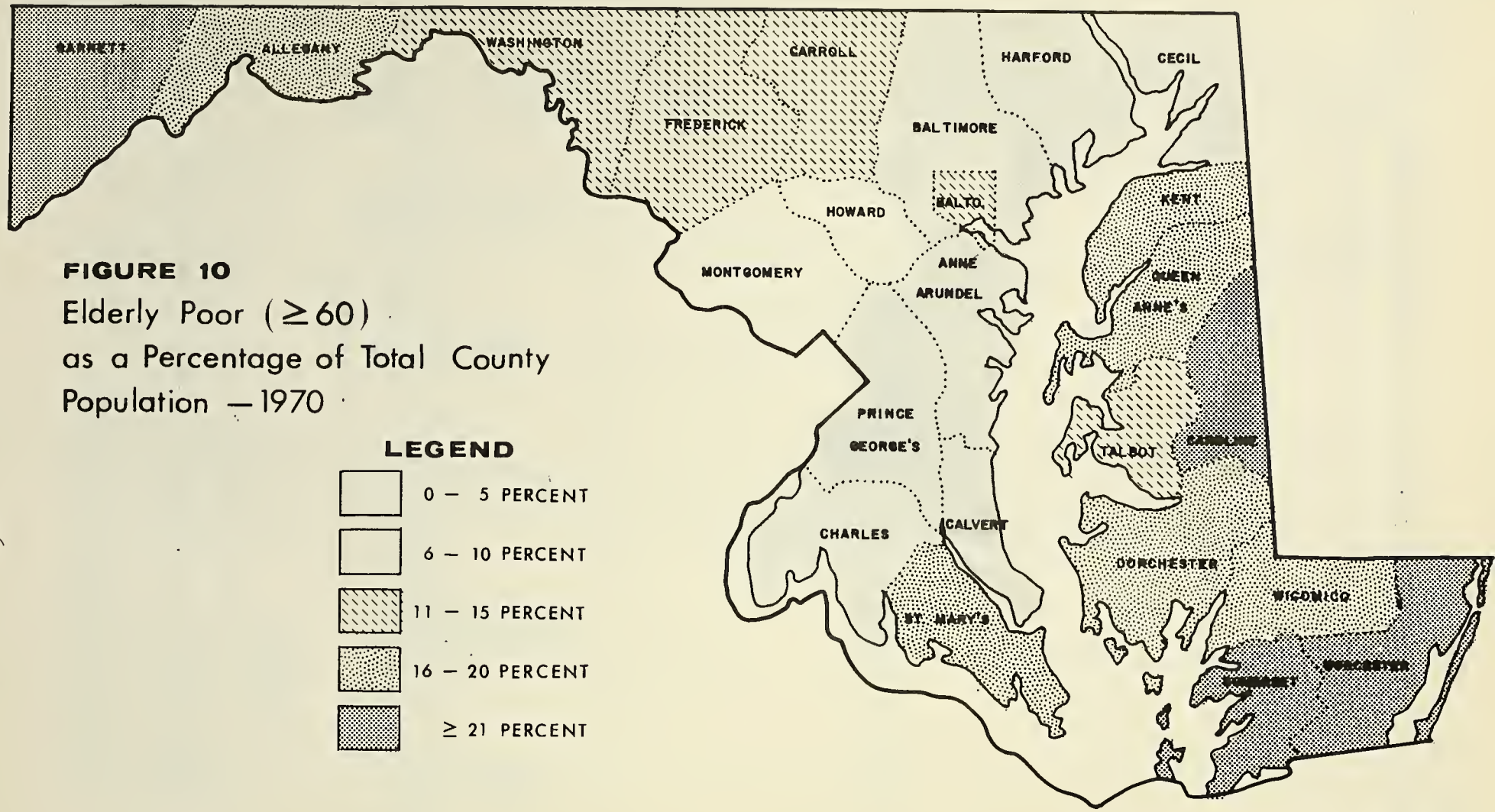


FIGURE 10

Elderly Poor (≥60) as a Percentage of Total County Population — 1970

SOURCE: See Table 2

Table 2
Percentages of Elderly Poor in
Maryland by Region and by County - 1975[1]

	Population	Persons ±60 in Maryland	Persons ±60 in Maryland Poor	% of ±60 County Population Who Are Poor	% of ±60 State Population Who Are Poor
Western Maryland	213,090	34,940	5,983	17.0	11.8
Allegany	82,790	15,290	2,738	17.9	
Garrett	22,090	3,750	862	23.0	
Washington	108,210	15,900	2,383	15.0	
Frederick	95,350	12,330	1,572	12.7	3.1
Baltimore Metropolitan	2,165,610	280,780	28,340	10.1	55.9
Anne Arundel	343,670	30,910	2,535	8.2	
Baltimore	660,990	84,530	4,918	5.8	
Carroll	80,380	11,400	1,318	11.6	
Harford	132,970	10,710	913	8.5	
Howard	98,850	7,830	406	5.2	
Baltimore City	848,750	135,400	18,250	13.5	
Washington Suburban	1,302,500	109,200	5,273	4.8	10.4
Montgomery	591,490	62,720	2,434	3.9	
Prince George's	711,010	46,480	2,839	6.1	
Upper Eastern Shore	139,610	22,900	3,346	14.6	6.6
Caroline	20,620	3,900	811	20.8	
Cecil	56,700	6,530	659	10.1	
Kent	16,780	3,130	507	16.2	
Queen Anne's	19,650	3,600	659	18.3	
Talbot	25,860	5,740	710	12.4	
Lower Eastern Shore	134,410	23,980	4,665	19.4	9.2
Dorchester	29,640	5,920	1,014	17.1	
Somerset	19,090	3,930	1,065	27.1	
Wicomico	57,850	9,030	1,521	16.8	
Worcester	27,830	5,100	1,065	20.9	
Southern Maryland	138,060	12,550	1,521	12.1	3.0
Calvert	25,400	3,070	355	9.7	
Charles	59,820	4,750	456	9.6	
St. Mary's	52,840	4,130	710	17.2	
State Total	4,188,630	496,680	50,700	10.2	100

[1]60+ poor calculated by Brofman Method using 1974 Census Bureau Poverty Figures.

Source: State of Maryland Population Projections by Maryland Department of State Planning for Maryland Office on Aging, May 1975.

Suburban Washington counties, comprising the second most populous region in the State, have slightly over 10% of the State's elderly poor population, this group constitutes less than 5% of the region's overall population.

Primary information on the numbers and location of the elderly-handicapped in Maryland is not readily available. U.S. Bureau of Census sampling procedures account for only those handicapped aged 16-64 in relation to employment status.[44] Nineteen-seventy national estimates placed the total number of elderly who are handicapped at 6,990,000 or 53% of the total U.S. elderly population.[45] Assuming a similar incidence in Maryland, the State's handicapped elderly can be estimated to be 176,845 based upon 1975 population projections.[46] This figure does not indicate the total number of persons according to the degree and nature of their mobility constraint, however.

The Magnitude and Location of the Handicapped

As we noted earlier, estimations of the handicapped population vary. Noting the total handicapped population does not necessarily indicate that the entire group is transportation impaired or disadvantaged nor do available figures detail the number of persons by type of disability. Estimates from indirect sources can provide rough estimates of the need group, however.

A national estimate of the number of handicapped individuals in 1970 who could not use transit or had difficulty in doing so, was placed at 13,370,000 or roughly 7% of the nation's population.[47] In Maryland, tabulations and estimations vary from 23,926 in 1974[48] to a 1975 projection of 204,401 (aged 16-64).[49] These totals vary according to definition and method of calculation.

If estimations of the total number of handicapped who are 65 or over (176,845) are added to the latter figure (204,401), then an upper bound of Maryland's handicapped population can be estimated at 381, 246 persons. Whether or

not all of these persons are transportation disadvantaged or transit-dependent is another question. Table 3 illustrates the distribution of disabled persons aged 16-64 by county in Maryland. Reliable area-specific figures, statewide, have not been obtained for handicapped persons 65 or over.

The Magnitude and Location of Low Income and Rural Populations

In Maryland, there were 386,579 persons with income less than the poverty level in 1970 (see Table 4) representing 9.8 percent of the total State population. Figure 11 illustrates persons with incomes less than poverty level by county as a percentage of the total county population. A division of the State into metropolitan (standard metropolitan statistical areas) vers s non-metropolitan and rural areas (all other areas of the State) reveals that 171,904 households in Standard Metropolitan Statistical Areas (SMSA) were without automobiles (17% of all such households) while 30,928 or 16% of all non-metropolitan households are lacking automobiles.[50] With the exception of Baltimore City, however, those areas which contain the highest percentages of auto-dependent households are counties in the Western portion and on the Eastern Shore of Maryland (see Figure 12).

The above discussions of the various disadvantaged groups can represent only gross estimates of their size and location on a Statewide basis. More detailed and area-specific information can be obtained at the county level (through coordinated social service and transit development planning) or through regional study efforts. Recent work by the Federal Urban Mass Transportation Administration (UMTA) has resulted in the development of incidence rates of the disadvantaged by regions and for standard metropolitan statistical areas.[51] These rates, however, can still only be gross measures of indicators of the transportation disadvantaged. Further research and refinement in this area is a continuing topic of study at the Federal level and several guides have

Table 3
Maryland Disabled 16-64 (1970)

	In Labor Force		Not in Labor Force
	Employed	Unemployed	
Western Maryland	4,374	341	6,617
Allegany	1,927	82	2,850
Garrett	322	22	999
Washington	2,125	237	2,768
Frederick	2,456	52	1,910
Baltimore Metropolitan	51,919	4,147	66,170
Anne Arundel	7,094	404	6,645
Baltimore	13,654	800	12,728
Carroll	1,881	71	1,711
Harford	2,996	182	3,551
Howard	1,178	23	1,002
Baltimore City	25,116	2,667	40,533
Washington Suburban	25,340	1,192	21,372
Montgomery	10,669	596	7,960
Prince George's	14,671	596	13,412
Upper Eastern Shore	2,859	118	3,080
Caroline	465	19	652
Cecil	1,140	36	1,108
Kent	437	23	299
Queen Anne's	313	15	413
Talbot	504	24	608
Lower Eastern Shore	3,497	343	3,326
Dorchester	552	85	949
Somerset	301	96	382
Wicomico	1,741	124	1,335
Worcester	903	38	660
Southern Maryland	2,220	226	2,843
Calvert	538	40	675
Charles	960	69	1,075
St. Mary's	722	117	1,093
State Total By Groups	92,665	6,418	105,318
State Total 204,401			

Source: Census of Population and Housing, U.S. Bureau of Census; 1970 Census Tapes, Maryland Department of State Planning, 4th Summary Tapes.

Table 4
Persons With Income Less Than
Poverty Level in Maryland - 1970

	County Total	% of Jurisdiction Total Population	Black	% of Jurisdiction Black Population	White	% of Jurisdiction White Population
Western Maryland						
Allegany	12,110	14.7	288	29.4	11,822	14.3
Garrett	5,606	26.5	NA	-	5,606	26.1
Washington	12,498	12.5	664	32.9	11,834	11.8
Frederick	8,438	10.3	1,495	27.1	6,943	8.8
Baltimore Metropolitan						
Anne Arundel	20,023	7.1	6,223	21.9	13,800	5.2
Baltimore	27,672	4.5	2,552	14.6	25,120	4.2
Carroll	5,502	8.6	323	17.9	5,179	7.8
Harford	8,523	7.7	2,037	23.3	6,486	6.1
Howard	3,137	5.2	861	18.8	2,276	3.9
Baltimore City	163,486	18.4	111,588	27.1	51,878	10.9
Washington Suburban						
Montgomery	21,683	4.2	3,563	17.1	18,120	3.6
Prince George's	37,080	5.8	9,260	10.4	27,820	4.9
Upper Eastern Shore						
Caroline	4,083	21.0	1,537	39.6	2,546	16.1
Cecil	5,140	10.4	825	34.5	4,315	8.6
Kent	2,642	17.0	1,126	28.8	1,516	12.4
Queen Anne's	3,312	18.3	1,338	31.4	1,974	14.1
Talbot	4,165	17.9	2,115	37.3	2,050	11.4
Lower Eastern Shore						
Dorchester	5,505	19.2	2,962	33.5	2,543	12.5
Somerset	5,180	28.1	2,515	37.7	2,665	22.6
Wicomico	8,550	16.2	3,723	33.7	4,827	11.3
Worcester	5,247	21.7	2,876	36.4	2,371	14.4
Southern Maryland						
Calvert	3,895	19.0	2,475	32.4	1,420	10.9
Charles	5,729	12.2	3,518	26.9	2,211	6.6
St. Mary's	7,373	16.5	2,908	36.7	4,465	11.5
State Total	386,579	9.8	166,772	22.8	219,807	6.8

Source: General Social and Economic Characteristics - Maryland, 1970 Census of Population, Bureau of the Census, issued March 1972, pp. 342 and 350.

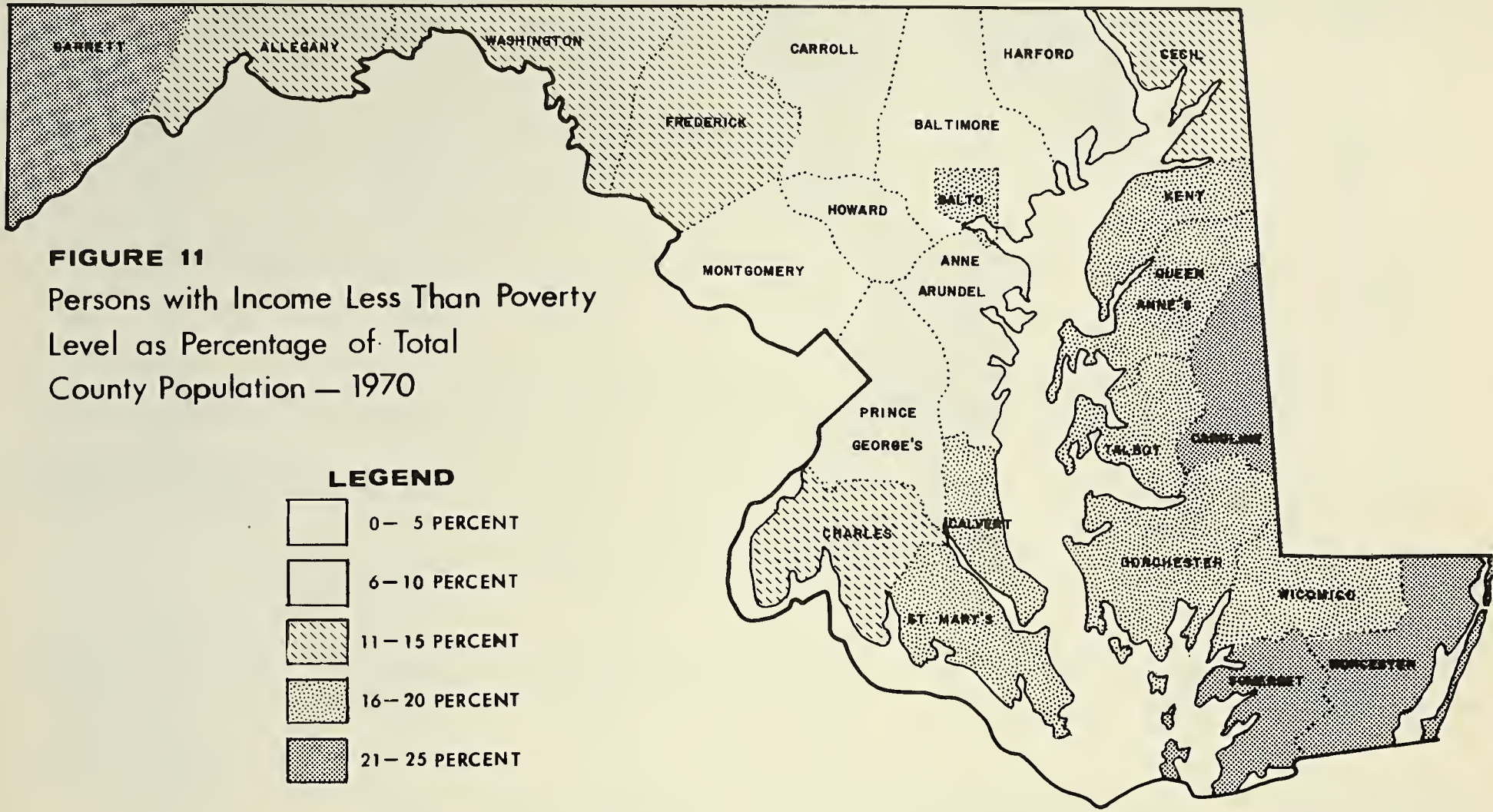


FIGURE 11

Persons with Income Less Than Poverty Level as Percentage of Total County Population — 1970

SOURCE: Derived from: General Social and Economic Characteristics - Maryland, 1970 Census of Population, Bureau of Census, issued March 1972, pp. 342 & 350.

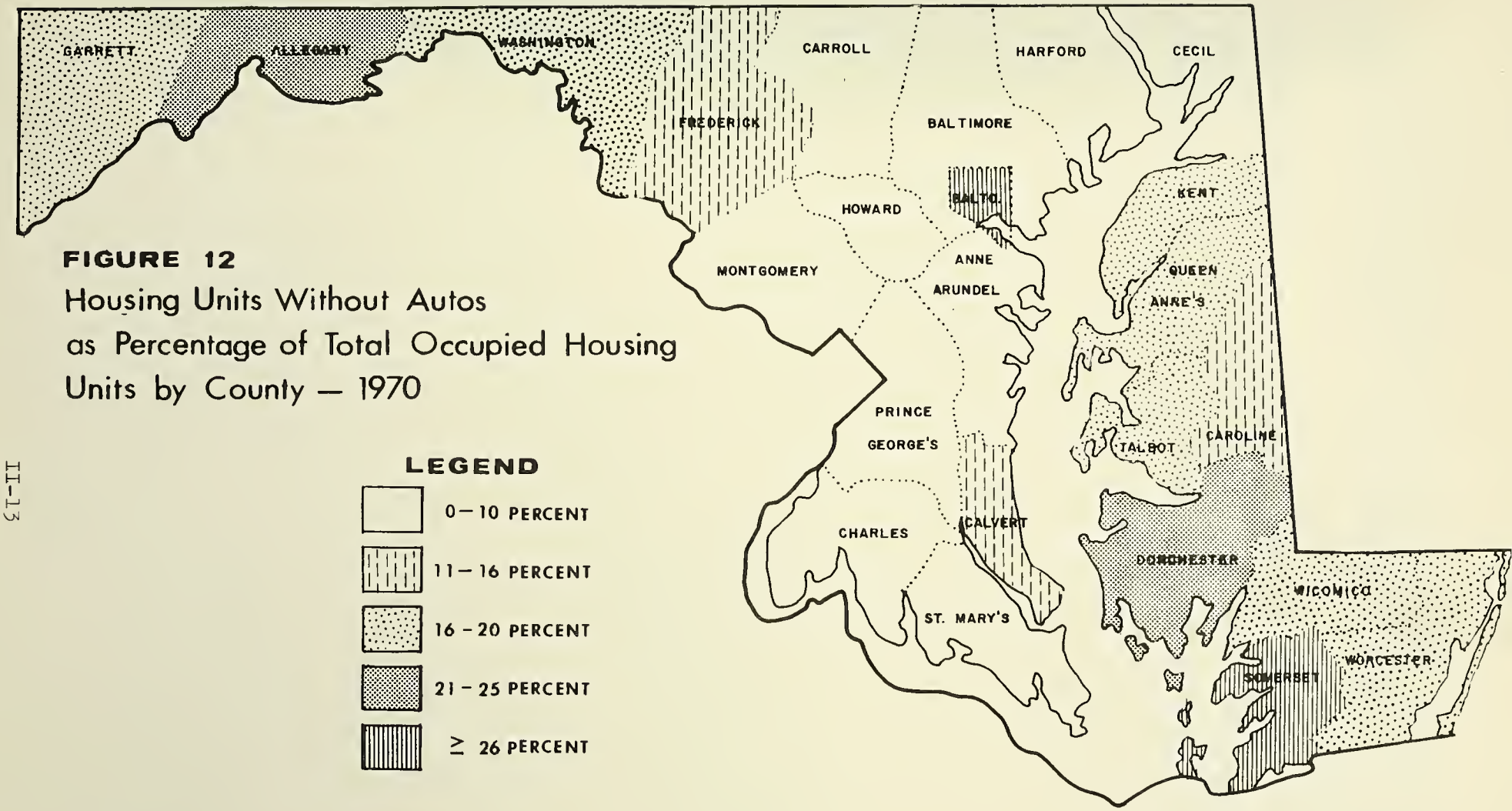


FIGURE 12

Housing Units Without Autos as Percentage of Total Occupied Housing Units by County — 1970

SOURCE: Derived from: General Social Characteristics - Maryland, 1970 Census of Population, Bureau of Census, issued March 1972.

been developed by various agencies of the Federal government to aid State and local governments in planning and managing systems to address the mobility needs of the disadvantaged.[52]

The next section inventories the progress presently made by the Federal government, Congress and by State and local governments, agencies and special interest groups in addressing the transportation problems of the disadvantaged.

CHAPTER III
EFFORTS TO ADDRESS MOBILITY PROBLEMS IN MARYLAND

This chapter presents the various legislative provisions, planning studies and inventories of the various programs and projects which would impact the transportation disadvantaged in the State of Maryland. In the first part, applicable Federal legislation and regulations are reviewed with attention devoted to mandatory provisions for inclusion of the elderly and handicapped considerations in planning and design of transportation facilities. The multiplicity of legislative provisions does not necessarily signal a wide recognition of the disadvantaged condition, however. Despite legislation and regulations, a host of operational, institutional and economic barriers remain before true 'equal accessibility' can be achieved. Recent Federal efforts to overcome these difficulties are discussed in more detail in Chapter IV.

Part II provides a brief description of the various planning and needs assessment studies currently underway or recently completed in the State. Many of the survey-type studies have the same finding: lack of transportation inhibits opportunities for individual growth and development; existing public transportation is inadequate or inappropriate for many disadvantaged persons; various modes of travel with certain service characteristics are preferred for reasons of comfort, safety and reliability, etc. The studies found in Part II also indicate a marked increase in attention devoted to the transportation disadvantaged, particularly the elderly and the handicapped. However, the measure of the worth of these studies is to what degree they can be translated into implementable service delivery programs.

In Part III, we inventory and discuss existing programs and resources which are or could be devoted to alleviating mobility problems of the disadvantaged. This not only includes current operating systems but State legislative and

executive initiatives. Once again, caution must be exercised in observing simply the number of active programs. No attempt is made to qualitatively assess the impact on the disadvantaged by these projects.

Part I: Efforts at the Federal Level

Since the Federal government plays a significant role in developing legislation which is intended to address the needs of the disadvantaged segments of the general population, it is useful to provide a summary of the legislation and regulations which have been promulgated to date. Summarized below is Federal legislation which either specifically addresses or contains elements which address the transportation needs of the various transportation disadvantaged groups.

Urban Mass Transportation Act of 1964[53]

This act holds primary importance because it establishes as national policy, a ruling that elderly and handicapped persons must have equal access to mass transportation facilities and services. The act stipulates that special efforts be made in the planning and design of mass transportation facilities and services to accommodate the special needs of the elderly and handicapped. It also stipulates that all Federal programs offering assistance in the field of mass transportation (including the programs under the Act itself) should contain provisions to implement this policy.

Funds from UMTA's Capital Grant Program, Section 3, can be used to provide specially equipped vehicles and facilities, to make rapid transit station improvements, to remove travel barriers and to improve travel safety. Technical study funds, Section 9, are available for data collection, analysis of the needs of special user groups and for planning of specialized services. Research, development and demonstration funds, Section 11, may be used to do research on the transportation needs of the disadvantaged and to increase the information and technology available for providing improved transportation facilities and services.

Section 16(b) of this act authorizes the Urban Mass Transportation Administration to provide grants and loans: 1) to States and local bodies thereof - Section 16(b)(1); and 2) to private non-profit corporations and associations - Section 16(b)(2); for the specific purpose of assisting them in providing transportation services meeting the special needs of elderly and handicapped persons. Funds for the latter are granted to non-profit organizations (NPO's) when services provided by State and local bodies are unavailable, insufficient or inappropriate. Section 16(b)(2) with specific reference to Maryland will be discussed later in the chapter.

National Mass Transportation Assistance Act of 1974[54]

This legislation amended the UMTA legislation of 1964 to provide for additional federal assistance in financing public transportation. Section 5 provides federal funds to urbanized areas for operating (up to 50% Federal participation) or capital projects (up to 80% Federal participation). Section 5 is a six year mass transportation assistance program with apportionments made to each urbanized area according to a formula based upon population and density. No measures are included which provide operating assistance to non-urbanized areas. In addition, 49 U.S.C. 1604(b) states that nothing in the transportation section of the United States Code shall require the charging of fares to elderly and handicapped persons. Furthermore, Section 1604(m) requires that recipients of Federal Mass Transportation assistance not charge disabled and elderly passengers more than one-half the fare applicable to other persons during non-peak hours.

The Act provides up to $500 million in capital funds for exclusive use in non-urbanized areas during the six year period from 1975 through 1980. Such non-urbanized areas include cities, towns and rural places with less than 50,000 population. Funds are available for planning and program development activities,

innovative service activities, vehicle acquisition and other capital investments in support of general or special transit services, including those services provided for elderly, handicapped and other transit-dependent persons.

The Federal Highway Act of 1973[55]

The Federal Aid Highway Act is intended to: "a) increase the mobility of those persons in rural areas who do not have reasonable access to alternate forms of transportation and are often deprived of mobility where public transportation is made inadequate or non-existent; b) encourage the various programs or agencies which provide transportation or social services to develop a coordinated approach to the organization and financing of public transportation; c) develop the results of the demonstration into a useful guide for rural areas needing public transportation; and d) develop the technical, organizational and economic information needed for future decisions regarding national programs for rural transportation."[56]

This Act contains two important sections affecting the disadvantaged. Section 165(b) explicitly states that mass transit projects funded by the Highway Trust Fund shall be planned and designed so that facilities and services can be used by elderly and handicapped individuals. Section 147 of the act makes provisions for the funding of rural transportation projects through nondiscretionary grants. UMTA and FHWA jointly administer this program which was originally designed to provide $30 million for a two-year period for rural and small urban public mass transportation demonstration projects. Active participation by the State is necessary with each State Transportation Agency being expected to lend technical assistance to local jurisdictions and coordinate application procedures.

Project selection criteria for Section 147 include: Innovative features with national applicability, financial commitment by participating agencies and

governments; likelihood of continued operation after demonstration expiration, justification of need, compatibility with existing systems; extent to which the proposal recognizes the transportation needs of economically deprived rural people and provisions for service to elderly and handicapped persons. The Act does not provide operating subsidies for existing systems (as specified by the UMT Act of 1974). Some portion of the grant can be used as an operating subsidy, but only if the service to be initiated is a new one or an innovative addition to an existing system.

The Federal Aid Highway Act (Amendments) of 1974[57]

23 U.S.C. 105 further specifies that any project receiving Federal Mass Transit funds must be made accessible to every disabled and elderly person, including those in wheelchairs.

The Amtrak Improvement Act of 1974, 45 U.S.C. 545(c)[58]

This legislation provides for a national rail passenger system for the purpose of supplying modern, efficient, intercity rail passenger service. Section 545 authorizes the rail passenger corporation to take all necessary steps to insure that no elderly or handicapped individual is denied intercity transportation. This includes, but is not limited to, designing and acquiring new equipment and facilities, conducting special training for employees, eliminating architectural and other barriers in existing equipment and complying with the highest standards for the design, construction and alteration of property to accommodate elderly and handicapped individuals. The act includes the provision for special assistance to the elderly and handicapped when boarding and alighting in terminal areas.

1975 Joint FHWA-UMTA Transportation Planning Regulations for Urbanized Areas[59]

The Joint Regulations became effective in October 1975 and altered the planning process for urban transportation planning for future years by placing the Federal Highway Administration and the Urban Mass Transportation Administration under one coordinative roof. Planning certifications and the review of all projects requiring FHWA or UMTA funding are to be accomplished in a joint manner. Two important requirements were created as a result of the promulgation of those joint regulations. The first was a requirement for a Transportation Improvement Program (TIP) which is a comprehensive listing of all capital improvements projects within the urbanized area to be implemented with a combination of FHWA, UMTA and local funds. The content of the TIP is not limited to an inventory of projects, but must also include a project priority listing, reasonably accurate cost and revenue estimates and a discussion of how the projects fit into the overall transportation planning process as indicated in the Transportation System Management Plan (see below). Because implementation of the annual element of the TIP involves the use of Federal funds (including UMTA funds) provisions for special transportation for the elderly and handicapped must be included (pursuant to UMT Act of 1974, as amended). The second important requirement in the joint regulations is the Transportation Systems Management element (TSM). The TSM is a plan designed to meet the short-range transportation needs of urban areas through efficient use of existing facilities. Potential TSM efforts can and do include traffic operations, bicycling, exclusive bus lanes, staggered work hours, improved transit market programs, etc.

1976 Urban Mass Transportation Planning and Accessibility Regulations for the Elderly and the Handicapped[60]

In April of 1976, UMTA issued final regulations governing the use of federal funds for the purpose of providing access to the elderly and the handi-

capped in urban mass transportation. These regulations provide clarifications, additional specifications and outline justification for certain of UMTA's policy and technical stances. The regulations address both planning and accessibility requirements and standards. They also define elderly and handicapped individuals as those persons who, "by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity or disability, including those who are non-ambulatory wheelchair-bound and those with semi-ambulatory capabilities, are unable without special facilities or special planning or design to utilize mass transportation facilities and services as effectively as persons who are not so affected."[61]

The new UMTA regulations are designed to integrate transportation provisions for the ambulatory elderly and handicapped within 'a more accessible' regular transit service system. Additionally, each urban area's transportation planning process must make special provisions to significantly increase the level of service for wheelchair users and others not able to negotiate existing transit vehicle steps. UMTA also places emphasis upon the need for transportation service provision to those handicapped persons who are employed as well as those unable to obtain employment because of a lack of adequate or suitable transportation.

Transit Development Planning in Non-Urbanized Areas[62]

Pursuant to the UMT Act of 1964 (as amended), Section 16(b)(2) requirements, a Community-Wide Transit Development Program (TDP) will be required as a prerequisite for capital assistance to any non-profit organization in a non-urbanized area. The TDP must outline comprehensive transit needs including those of the elderly and handicapped. All opportunities for the provision of general and special transport services are to be identified with particular emphasis on

existing public and private transit and paratransit operators. UMTA will provide funds, however, if the State assures that a TDP will be prepared for each concerned jurisdiction within 12 months of contract execution. Funding for the preparation of the non-urbanized TDP is obtained through Section 9, technical studies grant.

Transportation Demonstration Grant Program - Office of Human Development (HEW)[63]

In May of 1976, the Office of Human Development announced the availability of 5 two-year demonstration grants aimed at determining the feasibility of coordinating and/or consolidating existing transportation resources within several OHD programs at the substate level. These programs address the needs of the transportation disadvantaged, with emphasis on the elderly, handicapped, developmentally disabled, Head Start eligibles and other children from low income families, and native Americans. Emphasis is to be directed toward coordinative and consolidative measures designed to increase cost-effectiveness in service delivery. Alternative delivery systems and organizational structures will be tested including proposals to more closely coordinate efforts by public transportation providers (bus and taxi) with human service programs. Statutory, regulatory and administrative barriers to implementing coordinated and/or consolidated approaches to the organization and financing of transportation services will be identified. One Maryland applicant, Howard County, was selected for one of these grants totaling nearly $75,000 in June of 1977.

Rehabilitation Act of 1973, Section 504[64]

This section of the Act is modeled after Section 601 of the Civil Rights Act of 1964 (as amended) and forbids discrimination against handicapped individuals under any program or activity which receives federal financial assistance.

Amendments in 29 U.S.C. 701 authorize programs which will: a) evaluate existing approaches to eliminate architectural and transportation barriers confronting handicapped individuals; b) develop new approaches; and c) enforce statutory and regulatory standards and requirements regarding barrier-free construction of public facilities. Amendments in 29 U.S.C. 792 created the Architectural and Transportation Barriers Compliance Board to examine alternative approaches to the architectural, transportation and attitudinal barriers which confront handicapped individuals. The board is directed to determine how and to what extent transportation barriers impede a handicapped person's mobility and to bring together, in a cooperative effort, the groups necessary to achieve effective and comprehensive action to eliminate such barriers.

Older Americans Act of 1973, Section 412 (Comprehensive Services Amendments)[65]

This Act directs the Administration on Aging (AoA) to "conduct a comprehensive study and survey of the transportation problems of Older Americans with emphasis on solutions that are practicable and can be implemented in a timely fashion."[66] In so doing, AoA is directed to carry out research and demonstration efforts either directly or by way of grants and contracts with public or private non-profit agencies and organizations. These efforts should develop solutions to elder Americans transportation service problems, experiment with innovative service measures and provide improved coordination between transportation and social service delivery systems. Title III of the Act directs AoA to assist State and local agencies in the development of a comprehensive and coordinated approach to the provision of services to the elderly. The designated agency can identify potential sources of transportation funding, advise on planning and implementation and coordinate with other agencies that might be involved in transportation planning and service provision. Title VII makes available funds for the transportation of elder Americans to and from food and nutrition projects.

Title XIX (Medicaid) of the Social Security Act[67]

Through this Act, funds are provided for the cost of transporting Medicaid recipients to and from health facilities. Title XX of the Social Security Act[68] makes funds available for the necessary travel to and from community facilities or resources for the receipt of services through purchase of service agreements with the State Department of Human Resources. (Table 5 outlines additional categorical Federal programs currently underway in the State which require transportation service in their operation.)

The Rural Development Act of 1972[69]

This act was created in an effort to maintain and enhance rural economic viability and the quality of rural life. Low cost loans and grants are extended to lending institutions, NPO's and communities to provide essential community facilities and services or to promote business and economic development. Purposes for these may include transportation related improvements designed to increase rural mobility.

The Urban Mass Transportation Act of 1964 established as national policy equal access to mass transportation facilities and services for the elderly and handicapped and stipulated that special efforts had to be made in the planning and design of these systems which utilize federal funds. Since the enactment of these provisions, additional legislation and amendments have served to heighten the awareness of transportation needs of special groups in all modes of transportation whether it be rapid rail, bus or aviation. Incorporation of special needs provisions is now a widely accepted mandate in transportation planning - this being heavily demonstrated by accessibility requirements now being met in public mass transit planning. The need for adequate transportation for special groups has long been recognized in federal human service

Table 5
Sources of Federal Human Service Program
Funds for Special Transportation Services

Funding Agency	Types of Programs Funded	Transportation Provided
Public Health Service (HEW)	Community Mental Health Centers, Comprehensive Public Health Services, Migrant Health Services, Crippled Children Services, Appalachian Health Program and Emergency Medical Services, Maternal and Child Health Services, Family Planning, Regional Medical Program, Community Health Centers	Medical and emergency transportation service
Office of Education (HEW)	Adult Education Program, Expansion of Adult Education Programs, Adult Education Special Experimental Demonstration Projects, Bilingual Education, Drop-Out Prevention Program, Career Opportunities Program, Aid to States for Education of the Handicapped Children in State Operated Schools, Programs for Educationally Deprived Children, Assistance to State for Education of Handicapped Children, Upward Bound, Talent Search, Special Student Services, Vocational Education, Title III (ESEA) Supplementary Education Centers and Services, Emergency School Aid Programs	Transportation services necessary to participate in educational programs
Office of Human Development (HEW)	Head Start, Medicaid, Aid to Families with Dependent Children, Rehabilitation Services Program, Developmental Disabilities Program, Title III (State and Community Programs on Aging), Title VII (Nutrition for the Elderly), Title I (Comprehensive Manpower Services), Title II (Public Employment Program), Job Corps, Summer Employment Programs for Youth, Senior Aides Program (Senior Aides, RSVP, Foster Grand Parent, Senior Companion), Work Incentive Program	Transportation services necessary to participate in programs

Table 5 (Con't)

Funding Agency	Types of Programs Funded	Transportation Provided
Community Services Administration	Community Action Programs, Emergency Food and Medical Services	Transportation services necessary to participate in programs
Justice Department	Law Enforcement Assistance - Discretionary Grants	Transportation services necessary to participate in programs
Veterans Administration	Auto Adaptive Equipment for Veterans, Beneficiary Travel	Mobility aids, transportation service necessary to participate in programs
Department of Labor	Emergency Job Program	Transportation service necessary to participate in programs

Source: Analysis of "A Comprehensive Inventory of Sources of Federal Funds for Rural Transportation Projects - Derived from the Expanded Metro-Mobility Task Force Report - Part III," the U.S. Department of Health Education and Welfare, by MDOT Socio-Economic Studies Group with revised updates provided by the Maryland Department of State Planning in its analysis of "Transportation Authorities in Federal Human Services Programs", January 1976, U.S. Department of HEW.

programs, however. This has resulted in a proliferation of program efforts to provide client transportation and as a result has caused a multiplicity of systems, each with restrictions on its use and inherent problems discouraging its efficient operation. The recent TSM, TIP and TDP provisions and requirements promulgated by the U.S. Department of Transportation provide opportunities to identify and coordinate various sector and program efforts at key points in an overall transportation planning process.

In Part II, we discuss planning and needs assessment activities at the State, regional and local levels, many of which are based upon Federal programs and legislation.

Part II: Current Transportation and Needs Studies For the Disadvantaged in Maryland

Study activity to determine and plan for the transportation needs of the disadvantaged traveler has increased in recent years. New federal regulations and guidelines combined with an increased awareness by the transportation disadvantaged of their mobility needs have prompted various State, regional and local transportation and social service agencies to conduct studies and prepare plans to address those needs. Listed below are various planning and needs studies currently underway, proposed or recently completed in the State of Maryland.

Elderly and Handicapped Needs Study Element of FY 1977: UTPP of the Baltimore Metropolitan Region[70]

The need to determine the transportation needs of elderly and handicapped persons in the Baltimore Region was recognized in the FY 1976 Unified Transportation Planning Program (UTPP). The UTPP is an effort to provide continuity to all the public transportation planning activity in the region and its annual product, the Unified Work Program (UWP) is implemented through a continuing, comprehensive and cooperative transportation planning process involving the Regional Planning Council, Maryland Department of Transportation, Maryland Department of State Planning and the public planning bodies of the Baltimore Metropolitan Area local jurisdictions.

The $198,600 elderly and handicapped work element of the FY 1977 UTP is designed to build upon the initial efforts that Baltimore City undertook during 1975 and 1976. It will expand in scope to consider the needs of elderly and handicapped persons in the entire region. Detailed design of vehicles and systems will not be undertaken by this study. Questions concerning architectural barriers are also beyond its range. Design elements already developed by other transportation projects in the Region will be noted insofar as they address the needs of

elderly and handicapped riders. In addition to Baltimore City's initial effort, the FY 1977 UTPP anticipates fulfilling the following objectives:

1. Identification of the elderly and handicapped populations in the Baltimore Region; development of a profile of their travel behavior; and identification of the needs of the target population for surface transportation in the Region.

2. Inventory and analysis of existing, programmed and planned transportation that serves/will serve elderly and handicapped persons in the Region.

3. To seek participation by citizens, especially those who are elderly or handicapped, in each phase of the study, and consult interested agency representatives.

4. Identification of transportation-related capacities and limitations of elderly and handicapped persons; identification of those characteristics of transportation modes which limit the mobility of such persons.

5. Investigation of alternative service options; consideration of improvements to existing service in the Region; investigation of the feasibility of a coordinated, multi-modal system to serve elderly and handicapped persons.

6. Development of comparative cost and service effectiveness data for each mode; determination of the financial ramifications of identified alternatives; and investigation of funding sources for improving transportation for elderly and handicapped persons.

7. Development of a plan to improve transportation for elderly and handicapped persons in the Region; recommendation of methods of implementing those improvements; and recommendation of specific areas that warrant further investigations. As part of the Regional transportation planning process, the Study will provide input to the General Plan, the Transportation Systems Management Element and the Transportation Improvement Program for the Region.

In order to fulfill these objectives, the study will be coordinated on a continuing basis with agencies administering ongoing service projects and study efforts in the region so that exchange of information and technical advice may be facilitated. To achieve this, the information exchange will be coordinated with: the Specialized Non-Ambulatory Bus Service to be operated by Lutheran Social Services; Section 16(b)(2) area projects; Baltimore Rapid Rail System design considerations for the elderly and handicapped and Phase II Study; Harford and Howard Counties transportation studies; the Health and Welfare Council of

Central Maryland Study; the Governor's Interagency Committee on Specialized Transportation; and survey activity of the State Office on Aging and the DSP.

UTPP of the Washington Metropolitan Region[71]

The FY 1977 Unified Transportation Planning Program of the Washington Metropolitan Region contains a work element for the study of the transit needs of the elderly and handicapped in that region. A $140,000 Study began in September of 1974 and is scheduled for completion during the latter portion of 1976. Under the direction of the Washington Metropolitan Area Council of Governments (COG) and the Washington Metropolitan Area Transit Authority (WMATA), the study is intended to estimate the level of unserved transit needs among the region's elderly and handicapped individuals (included are Montgomery and Prince George's Counties of Maryland). One consultant, Mark Battle and Associates, has recently completed an elderly and handicapped household consumer needs survey and other consultants have been charged with the evaluation of the results in concert with available and expected data from other technical studies. Alternative approaches of service provision to meet unsatisfied needs are to be developed and evaluated according to various criteria, including service system effectiveness and affordability. From these efforts, a recommended plan and program to meet the transit needs of the elderly and handicapped is to be developed with potential sponsoring agencies and institutional arrangements to be identified, where appropriate. Service provision alternatives being considered range from incremental low-cost measures to full service integration with the existing public transportation system network.

The COG/WMATA elderly and handicapped study is intended to build upon and utilize data from previous and existing WMATA Transit Technical Studies (including studies associated with elderly and handicapped use of the existing Metrorail and Metrobus Systems) and 1977 Transit Systems Planning (phased bus operations plan

and bus-rail development coordination). The study will be coordinated with and built upon existing Washington Area Transportation services for the elderly and handicapped as well as related studies such as the Montgomery County Public Transportation Resources Analysis Study; local Internal Transit and Circulatory Studies for several Prince George's County communities; and the Non-Standard Size Bus Study being conducted by WMATA.

Transit Development Studies in Non-Urbanized Areas of the State (Transit Technical Studies)[72]

In FY 1977, the $97,500 Non-Urbanized Areas Transit Development Technical Studies Work Program represents a continuation of programs adopted and funded in previous fiscal years. These studies, undertaken in many areas of the State, except the Baltimore and Washington Metropolitan Areas, are designed to produce Transit Development Programs (TDP) which, when adopted by the appropriate local authorities, will provide the basis for funding of Transit Capital Improvement programs, and in some instances, for operating assistance grants. The TDP's are to define the unmet transportation needs of the elderly and handicapped and recommend improvements to justify funding under Section 16 of the UMT Act of 1964 (as amended). In each area, the Transit Development Technical Study is to be fully coordinated with areawide land use and transportation planning.

Under programs for previous fiscal years, Transit Technical Studies have been completed or are underway in: Talbot, Washington, Dorchester, Allegany and Cecil Counties and the Tri-County Council Area of Southern Maryland (Calvert, Charles and St. Mary's Counties). Previous TDP related work has been accomplished in Wicomico County. The former Salisbury-Wicomico Transportation Authority was a product of this work.

The Fiscal Year 1977 Work Program provides for additional studies in other areas of the State. In each case, the State, subject to UMTA's approval, will

enter into an agreement with a legally qualified representative of the area. The agreement will incorporate a specifically designed work program for the area. Under the agreement, the State will supply 20% of the (non-Federal share) total study costs. The local authority is responsible for the remaining 5% and accepts responsibility for completing the study. It can be expected that Transit Technical Studies will be undertaken in: Garrett, Frederick, Somerset and Worcester Counties and the Upper Eastern Shore Region (Queen Anne's, Caroline and Kent Counties).

In addition to the preparation of transit technical studies, the Department of Transportation's Mass Transit Administration has indicated that it will conduct the following studies in FY 1977: A Statewide Transit Service Standards Study - guidelines for transit operations in the small urban areas of Maryland are necessary; and standards for levels of service for each of the various transit modes, marketing activities and minimizing costs for any given level of service will be developed; and a Statewide Transit Needs Identification Study - an inventory of existing transit resources and characteristics and the identification of areas in need of new service or upgrading of existing service will be done. Emphasis will be placed on the needs of the handicapped and elderly.[73]

Other Related Studies

Study of the Mobility Problems of the Transportation Disadvantaged by the Health and Welfare Council of Central Maryland (HWC)[74]

The HWC is currently conducting a study to determine the transportation service provisions for and mobility needs of the transportation disadvantaged in Central Maryland (Baltimore City; Baltimore, Anne Arundel, Howard, Harford and Carroll Counties). The study places emphasis upon the impact of client mobility needs on social service agency programs and service provisions. Preliminary work to date has: estimated the number of the area's transportation disadvantaged.

identified their mobility needs and expectations, noted the impact of their problems and needs on human service agencies, conducted an areal analysis of existing transportation services and advanced a discussion of issues and various service provision alternatives.

General findings of the HWC study indicate that both consumers and providers of service desire a transportation system that will improve and enhance the ability of the transportation disadvantaged to function socially. Consumers desired an affordable, easily accessible and safe system to overcome the primary problems of social isolation.[75] Much of the study's information on the 'disadvantaged consumers' travel patterns and needs was obtained from a detailed Baltimore City Department of Planning Survey.[76] This report generally affirms findings noted earlier in our discussion of the transportation disadvantaged's travel behavior. Service providers (primarily in terms of human service agency programs) were concerned with the costs of transportation in-line or ancillary to the program budget and with associated problems of under-scheduling and utilization of agency programs. In a survey of area human service agencies, the majority expressed a desire for some centrally coordinated program rather than individually based agency operations. HWC found that a comprehensive approach to transportation service provision encountered problems of limited resources, agency and government jurisdictional concerns and complex diversity of needed transportation accommodations.[79]

The HWC study which is still in a preliminary stage, is being coordinated with the Unified Work Program Study of the Baltimore Metropolitan Region, the Baltimore City Planning Department and area-wide human service agencies. The HWC hopes that its study efforts will serve to focus attention on the problems of the transportation disadvantaged and the difficulties that social service agencies encounter when attempting to provide transportation service. HWC

hopes its efforts will result in a renewed and enlightened discussion of the problems of the transportation disadvantaged and initiate definitive action towards comprehensive assessment and provision of service by appropriate bodies and agencies in Central Maryland.

Montgomery County Transportation Resources Analysis[78]

This study, included in the Washington Metropolitan Area (FY 1977 UWP), is designed to identify transit and paratransit systems that are most adapatable and cost-effective for serving the area's varying public transportation needs. Emphasis will be placed on the determination of the appropriate roles for private sector systems in meeting low-demand and specialized service needs in order to maximize the use of fiscal resources available to the County. Varying service arrangements will be examined for each type of service area to determine the most cost-effective approach for each. The study is part of the Montgomery County DOT's efforts to increase transit usage in the pre-Metro period, and to help shape transit-riding habits for post-Metro. The study is intended to pose potential alternative service arrangements in light of Metrobus budget constraints. Other efforts with which this study will be coordinated are: the Transit Information Center (county-wide telephone transportation information system), regional carpool program, capital grant application for commuter rail improvements, administration of a county taxi ordinance, the operation of 3 minibus systems and the COG study of the elderly and handicapped transportation needs.

Local Internal and Circulatory Transit Needs Studies[79]

Studies in several communities in Prince George's County are being conducted to determine project need and feasibility and design appropriate systems. A Circulatory Needs Study is being directed in the College Park-Greenbelt Area

while internal service is being investigated for the Laurel Area. Various para-transit system options will be investigated. It is expected that special needs of the elderly and handicapped will be identified.

The Central Maryland Area Agency on Aging (CMAAA)[80]

In 1975, CMAAA completed an examination of the transportation problems of the elderly and the various agencies providing them service in Baltimore City, Anne Arundel, Baltimore, Carroll and Harford Counties (this study did not include Howard County). The CMAAA is associated with the State Office on Aging which administers the State Plan under the Older Americans Act and other specific programs under Title III and VII of the Act. The findings of the CMAAA study indicated that obtaining adequate transportation is a problem for many elderly persons, even those in Baltimore City, where an extensive public transportation system exists. The problem is more pronounced in the counties where public transportation is minimal. The study also indicated what has surfaced on many other occasions; many elderly individuals experience problems in traveling to and from human service agencies and medical facilities.

In its fiscal year 1977 Area Plan for Programs on Aging, the CMAAA has identified the need to develop a more comprehensive approach to the provision of transportation services to the elderly in the Central Maryland region and has drafted a preliminary transportation plan to that end.

The Maryland Office on Aging and Metropolitan Washington Council of Governments

Both of these have produced inventories of transportation resources for the transportation disadvantaged. The Office on Aging's publication, Specialized Transportation of the Elderly in the State of Maryland[81] as its title indicates, is a statewide survey of transportation resources for the elderly. The COG's Directory of Special Transportation Services,[82] deals with the Metropolitan

Washington area (including Prince George's and Montgomery Counties in Maryland) and inventories transportation services for a variety of disadvantaged groups.

Non-Standard Size Bus Service Study for the Washington Metropolitan Area[83]

The objective of this study (managed by the Washington Metropolitan Area Transit Authority) is to investigate what place the non-standard size bus (midi, van, articulated) has in transit service for the Metropolitan Washington Area. The study will recommend the extent such transit vehicles should be utilized in future planning by WMATA. The study will also develop a detailed implementation plan for the fleet of 50 articulated buses presently being purchased by WMATA and will be fully coordinated with the District of Columbia's para-transit study, Montgomery County Project TRIP and the WMATA/COG study of the transportation needs of the elderly and handicapped.

The Transportation Task Force of the Association of Community Services of Howard County (ACS)[84]

ACS completed a survey in 1975 of the transportation problems of human service agencies located in Howard County. Their survey results confirmed that lack of public transportation in Howard County creates mobility problems for many of its residents. The ACS survey further indicated that many of Howard County's human service agencies experience considerable difficulty in transporting clients to and from agency facilities. As a result of the survey, the ACS has charged the Task Force with the responsibility of devising models to resolve these problems.

Frederick County Commission on Aging[85]

A survey was recently completed to determine the transportation needs of the County's elderly population. Findings of the study indicated a dependence upon and preference for the use of the automobile by the elderly. For those living alone, however, the need for special transportation was mot evident.

Data from the study indicated that persons sixty years of age or over go out infrequently; make little use of community resources, except for basic subsistence activities; and that they are minimally mobile with regard to social contacts. An additional finding noted that in a Title VII project, a small fee reinforced the pride of the individual and promoted a sense of independence.

The Baltimore County Commission on Aging[86]

This Agency is also in the process of studying the transportation needs of the elderly in the County. Preliminary data, from a 2000 person sample, confirmed the existence of significant mobility and accessibility problems encountered by the area's elderly, large percentages of the elderly noted special transportation needs for medical, social and shopping purposes. According to preliminary findings, 58% of the sample stated they would utilize special dial-a-ride service for Senior Citizens at least once a week, while 62% of that group indicated they would use the service more frequently.

It is important that relevant data be gathered, that surveys be taken, statistics be tabulated and informed policies be drawn from this information. The studies cited have not only served to build a knowledge base for future planning but in many instances provided increased opportunities for the transportation disadvantaged to voice their concerns and enlighten the public and government of their plight. It is essential that the transportation disadvantaged have a prominent role in the investigation and determination of their needs and measures to meet them. Existing measures in the State are subsequently discussed in Part III.

Part III: Current Programs in the State, Including Legislation and Executive Mandates

Governor's Interagency Committee on Specialized Transportation

In response to Urban Mass Transportation Administration provisions for specialized transportation as set forth in Section 16(b)(2) of the UMTA Act of 1964 (as amended) and pursuant to subsequent UMTA planning guidelines and requirements, Governor Mandel issued a 1975 Executive Order creating an Interagency Committee on Specialized Transportation (ICST). The charge of the Committee was as follows:

1) develop an overall effective plan to provide transportation services meeting the special needs of handicapped and elderly persons which will make the maximum use of available federal funds;

2) in the process of plan development, identify existing private, non-profit corporations and associations providing transportation services meeting the special needs of handicapped and elderly persons and encourage the establishment of new ones; and

3) coordinate the efforts and activities of those State agencies involved in providing for these special transportation services.[87]

To date, the ICST's activities have been primarily directed to the selection of Section 16(b)(2) grant recipients and administration and monitoring of Section 16(b)(2) projects operated by non-profit corporations. The Maryland Department of Transportation (Mass Transit Administration) and the ICST provide technical assistance in the preparation and submission of applications. ICST selects the applicants while MTA purchases the vehicles for the non-profit organizations. The Maryland Office on Aging monitors and evaluates the ongoing programs. Committee meetings are chaired by an Executive Assistant to the Governor and is comprised of representatives from the Departments of Transportation, Health and Mental Hygiene, State Planning, Education, Human Resources and from the Maryland Office on Aging and the Central Maryland Agency on Aging.

Maryland's Section 16(b)(2) Program[88]

As previously indicated (in discussions of the UMT Act of 1964 and Transit Development Planning for Non-Urbanized Areas), there are certain qualifications and conditions which must be met before a private, non-profit organization can obtain 16(b)(2) vehicles. To qualify for a grant, a non-profit organization must be located in an area for which there is a Transit Development Plan (TDP) that describes present and projected transit needs and outlines planning measures to meet them. The TDP must specifically include an element that addresses the transit needs of the elderly and handicapped. Section 16(b)(2) funds may be received prior to completion of the TDP if a commitment to prepare one within 12 months is made or if the TDP is being prepared. Also, the existing public and private carriers must be informed of and concur with the proposed 16(b)(2) project to insure that duplication of service efforts does not occur. In order to facilitate the procurement of 1976 16(b)(2) funds, the Mass Transit Administration has been holding a series of meetings with the various counties throughout the State. The express purpose of these meetings is to familiarize those individuals in responsible positions of the requirements for Transit Development Plans (TDP) and suggest ways in which they can meet those requirements. Table 6 provides a profile of the recipients of 16(b)(2) funds and vehicles for Fiscal Year 1975. Vehicle type and distribution of projects costs are illustrated. The State of Maryland received $319,000 from UMTA in 1975 to implement the 16(b)(2) program.

The 1976 Fiscal Year program provides a federal grant totaling $349,000 which will be awarded to various non-profit organizations according to Section 16(b)(2) guidelines in Maryland. Table 7 provides a summary of 1976 16(b)(2) recipients. More emphasis is being placed, this year, on coordination between elderly and handicapped service providers as well as making available

Table 6

Organizations Approved for Funding Under Section 16(b)(2) of the Urban Mass Transportation Act of 1964, As Amended For FY 1975 in Maryland

Approved Agency and Jurisdiction	Vehicles			Special Equipment				
	Quantity	Type	Passenger (Seated-Wheelchair)	A/C	Lift	Raised Roof	Farebox	Unit Cost
BALTIMORE METROPOLITAN								
Baltimore City								
*Home for Incurables of Baltimore City (Keswick)	1	Van	0-4	X	X	X		$ 9,567.00
*Baltimore-Central Md. League for Crippled Children & Adults, Inc.	2	Van	6-2	X	X	X		9,763.00
*The Baltimore Good-will Industries, Inc.	1	Station Wagon	9-0	X				5,643,00
*Northeast Community Organization	2	Van	8-1	X	X	X		9,763.00
*Lutheran Social Services of Md., Inc.	10	Buses	13-3	X	X	X	X	32,897.18
Central Maryland								
*United Cerebral Palsy of Central Md., Inc.	1	Van	8-2	X	X			9,567.00
	1	Van	6-2	X	X	X		9,763.00
	1	Van	6-2	X	X			8,755.00
*Community Action Council of Howard County, Md.,	2	Station Wagon	9-0	X				4,803.60
	1	Van	6-2	X	X	X		9,763.00

Table 6 (Con't)

Approved Agency and Jurisdiction	Vehicles: Quantity	Vehicles: Type	Vehicles: Passenger (Seated-Wheelchair)	Special Equipment: A/C	Special Equipment: Lift	Special Equipment: Raised Roof	Special Equipment: Farebox	Unit Cost
Central Maryland (Con't)								
*Providence Center, Inc.	2	Van	15-0					$ 7,059.26
*Carroll County Assoc. for Retarded Citizens, Inc.	3	Van	12-0					5,927.34
WESTERN MARYLAND								
*Washington County Community Action Council, Inc.	1	Station Wagon	9-0					4,425.30
	1	Van	2-3		X	X		9,328.00
	1	Van	15-0					6,656.91
*Garrett County, Md. Community Action Committee, Inc.	2	Van	12=0					5,927.34
	1	Van	15-0					6,076.04
*Jeanne Bussard Training Workshop, Inc.	1	Station Wagon	9-0					4,425.30
	1	Van	15-0					6,656.91
WASHINGTON METROPOLITAN								
Prince George's County								
*Bowie Women's Club, Inc.	2	Van	8-1	X	X	X		9,763.00
Montgomery County								
*Jewish Counicl for the Aging of Greater Washington, Inc.	1	Van	15	X				6,811.71
	1	Van	6-2	X	X	X		9,763.00

Table 6 (Con't)

Approved Agency and Jurisdiction	Vehicles			Special Equipment				
	Quantity	Type	Passenger (Seated-Wheelchair)	A/C	Lift	Raised Roof	Farebox	Unit Cost
Montgomery County (Con't)								
•Montgomery County Assoc. for Retarded Citizens, Inc.	3	Van	6-2	X	X	X		$ 10,782.00
•Center for the Handicapped, Inc. (formerly Cerebral Palsy Assoc. of Montgomery County, Inc.)	3	Van	8-2	X	X	X		9,813.00
SOUTHERN MARYLAND								
•St. Mary's Jaycees	1	Van	6-2	X	X	X		9,763.00
	1	Van	15-2	X		X		9,163.00
EASTERN SHORE								
•Cecil County Assoc. for Retarded Children, Inc.	1	Van	15-0					6,656.91
	1	Van	6-2	X	X	X		9,763.00
•The Benedictine School for Exceptional Children, Inc.	1	Van	15-0	X				6,811.71
•Worcester County Developmental Center, Inc.	2	Van	15-0	X				6,811.71

Table 6 (Con't)

Approved Agency and Jurisdiction	Vehicles			Special Equipment				
	Quantity	Type	Passenger (Seated-Wheelchair)	A/C	Lift	Raised Roof	Farebox	Unit Cost
EASTERN SHORE (CON'T)								
*Shore Up! Inc.	3	Van	6-2	X	X	X		$ 9,763.00
*Lower Shore Sheltered Workshop, Inc.	1	Van	8-1	X	X	X		9,763.00
TOTAL	56							$704,139.43

Source: Governor's Interagency Committee on Specialized Transportation

Table 7
Organizations Approved for Funding Under Section 16(b)(2) of the Urban Mass Transportation Act of 1964, As Amended For FY 1976 in Maryland

Approved Agency and Jurisdiction	Vehicle(s)					Special Equipment			Estimated Cost ($)		
	Station Wagon	Van	15-17 Passenger Bus	School Bus	Total	Wheel-Chair Lift	A.C.	Radio	Total	Federal (80%)	Local (20%)
BALTIMORE METROPOLITAN											
*Howard County Association for Retarded Citizens, Inc.	1	1			2		1		14,960	11,968	2,992
*Howard County Community Action Council, Inc.				1	1	1	X	X	26,320	21,056	5,264
*Mt. Washington Pediatric Hospital, Inc. (Baltimore City)		1			1	1	X		13,490	10,792	2,698
*United Cerebral Palsy of Central, Md., Inc. (Baltimore County)		3			3	3	X		40,400	32,320	8,080
*Neighborhood Transportation, Inc. (Baltimore City)		3			3	2	X		35,670	28,536	7,134
*Community Concern Corporation (Baltimore City)			1		1	1	X		19,800	15,840	3,960
*Mercy Hospital, Inc. (Baltimore City)	1				1		X		7,040	5,632	1,408

Table 7 (Con't)

Approved Agency and Jurisdiction	Vehicle(s)					Special Equipment			Estimated Cost ($)		
	Station Wagon	Van	15-17 Passenger Bus	School Bus	Total	Wheel-Chair Lift	A.C.	Radio	Total	Federal (80%)	Local (20%)
BALTIMORE METROPOLITAN (CON'T)											
•Baltimore Association for Retarded Citizens, Inc. (Baltimore City)		2			2			X	17,380	13,904	3,476
•West Baltimore Community Health Care Corporation (Baltimore City)		2			2	1	X		22,180	17,744	4,436
•Children's Rehabilitation Institute, Inc. (Baltimore City)		1			1	1	X		13,490	10,792	2,698
WESTERN MARYLAND											
•Allegany County Human Resources Development Commission, Inc.		1			1		X		7,370	5,896	1,474
•Reeder's Memorial Home, Inc. (Washington County)			1		1	1	X		19,800	15,840	3,960
SOUTHERN MARYLAND											
•Melwood Farm Training Center, Inc. (Charles County)		1			1		X		8,800	7,040	1,760

Table 7 (Con't)

Approved Agency and Jurisdiction	Vehicle(s)					Special Equipment			Estimated Cost ($)		
	Station Wagon	Van	15-17 Passenger Bus	School Bus	Total	Wheel-Chair Lift	A.C.	Radio	Total	Federal (80%)	Local (20%)
SOUTHERN MARYLAND (CON'T)											
*Spring Dell Center, Inc. (Charles County)		1			1	1	X		13,490	10,792	2,698
*Calvert Association for Retarded Citizens, Inc. (Calvert County)		1			1		X		8,690	6,952	1,738
WASHINGTON METROPOLITAN											
*United Communities Against Poverty, Inc. (Prince George's County)			1		1	1	X	X	20,240	16,192	4,048
*Centers for the Handicapped, Inc. (Montgomery County)		4			4	2			41,280	33,024	8,250
*Prince George's County Chapter of the American Red Cross	1				1		X		7,040	5,632	1,408
LOWER EASTERN SHORE											
*Dorchester Developmental Unit, Inc. (Dorchester County)	1		1		2	1	X		26,840	21,472	5,368

Table 7 (Con't)

Approved Agency and Jurisdiction	Vehicle(s)					Special Equipment			Estimated Cost ($)		
	Station Wagon	Van	15-17 Passenger Bus	School Bus	Total	Wheel-Chair Lift	A.C.	Radio	Total	Federal (80%)	Local (20%)
LOWER EASTERN SHORE (CON'T)											
•Somerset County Developmental Center, Inc.	1				1				6,490	5,192	1,298
•Blind Industries and Services of Maryland (Wicomico County)		2			2		X		17,380	13,904	3,476
•The Holly Center Foundation, Inc. (Wicomico County)			1		1	1			17,600	14,080	3,520
•Worcester County Association for Retarded Citizens, Inc.		1			1		X		8,690	6,952	1,738
Total Equipment	5	24	5	1	35	17			414,438	331,550	82,888
Grant Administration Cost (05%)									21,812	17,450	4,362
Total Grant									436,250	349,000	87,250

Source: Governor's Interagency Committee on Specialized Transportation.

16(b)(2) vehicles where possible for the use of the general elderly and handicapped public. Figure 13 locates Section 16(b)(2) grant recipients in Maryland for Fiscal Years 1975 and 1976. Some recipients serve multi-county areas. Nevertheless, some counties in the State have no 16(b)(2) programs in operation.

State Program for Operating Assistance to Public Transportation Systems in Non-Urbanized Areas[89]

As already noted, funding for capital programs (Section 3) and operating costs (Section 5) for mass transportation systems in urban areas is available from the Urban Mass Transportation Administration. For non-urbanized areas, however, federal funding is available to cover, at present, only capital costs. The State's Mass Transit Administration, therefore, has instituted its own operating assistance program for non-urbanized area systems to allow for their continued operation. The State program stipulates that assistance will be provided according to the following: a) the State will not assume more than 70% of the total operating costs, or b) it will underwrite an aggregate amount based on a predetermined per capita dollar figure for the area's total population - whichever is less. Several local transportation authorities are utilizing the program including the Allegany Transit Authority in the Cumberland area and the Washington County Transit Authority. Figure 14 illustrates the location of public transportation systems in the State of Maryland.

Mass Transit Administration (Baltimore Mass Transit)

Reduced Fare

As required by Federal law (National Mass Transportation Assistance Act of 1974) any public transit system which utilizes federal funds must not charge its elderly and handicapped passengers in off-peak hours more than half the highest fare charged any other passenger for a similar trip at any time.[90] In response

FIGURE 13

Location of Non-Profit Organization Grant Recipients in Maryland FY 1975 and 1976[1]

SOURCE: From information supplied by the Governor's Interagency Committee on Specialized Transportation

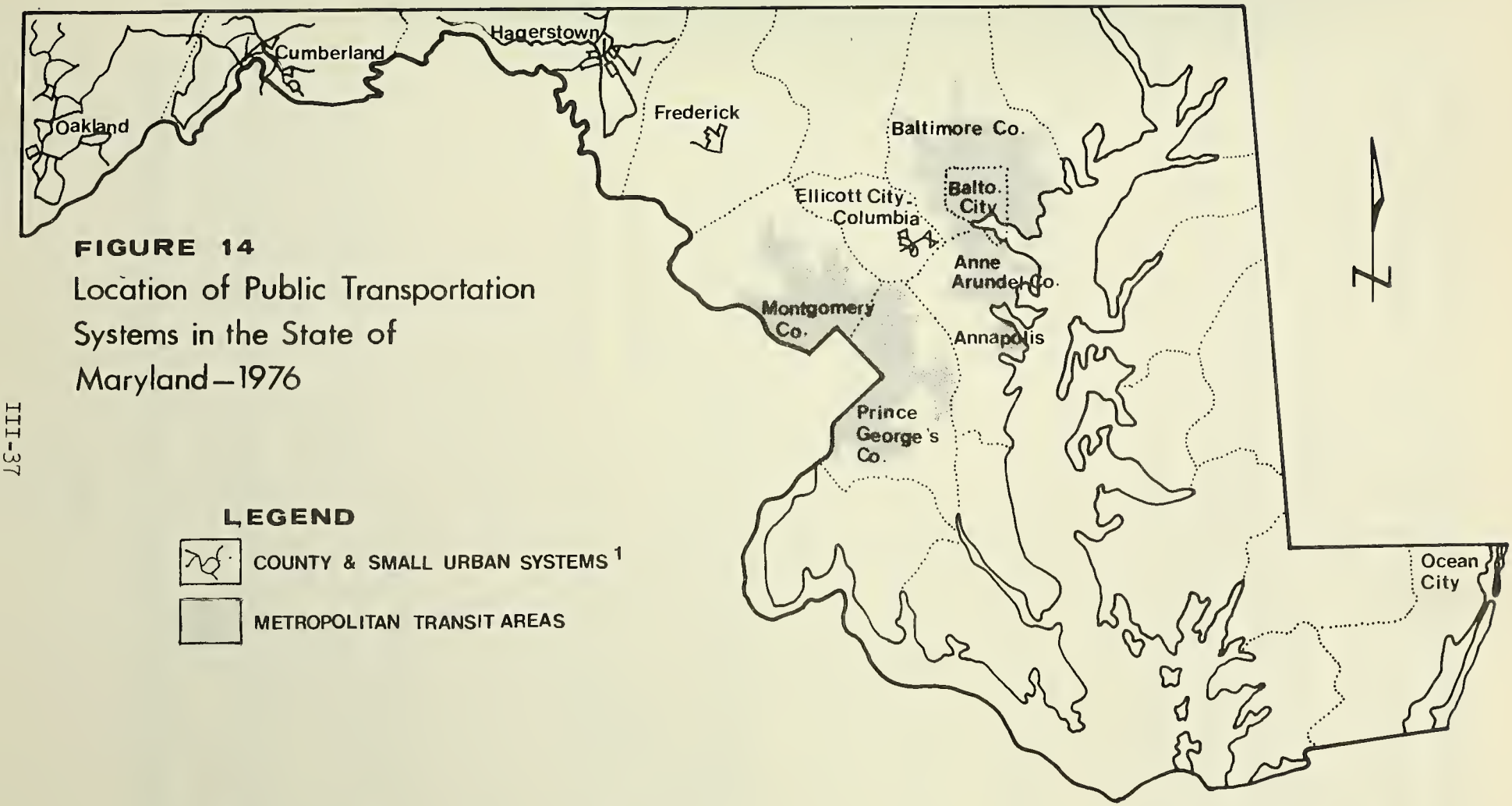


FIGURE 14

Location of Public Transportation Systems in the State of Maryland—1976

SOURCE: Maryland Department of State Planning

[1] Montgomery and Prince George's Counties public transportation systems also included within Washington Metropolitan Area Transit Area.

to these federal requirements, the MTA reaffirmed its reduced fare programs for the elderly (those persons 65 years of age or older) expanding it to include the handicapped and placing it in effect 24 hours a day, seven days a week in the Baltimore Metropolitan Transit District.[91]

To participate in the program, an elderly individual must apply in person at a designated Senior Citizen Registration Center. Proof of age, such as a driver's license, birth certificate or Medicaid Card is required. Once eligible, a registrant is issued an identification card entitling him to all the benefits of the reduced fare program. Individuals who are handicapped, but ambulatory (non-ambulatory service is provided by a special system operated by Lutheran Social Services, see below), may obtain identification cards entitling them to reduced fare benefits by having their physician complete an MTA application form. Individuals with temporary disabilities can obtain temporary handicapped reduced fare status. The MTA determines ambulatory handicapped to be:

> "a person who is physically able to utilize the currently available transit equipment provided by the MTA, albeit with some difficulty, in such a manner so as not to present a hazard to themselves or other members of the general public.[92]

The initial fare for an eligible elderly or handicapped individual is 15¢ (requiring a special token) while transfers are free of charge and zonal charges are 5¢.

Transit Vehicle (Bus) Specifications

As a result of 1974 legal action, the MTA was prompted when purchasing new transit buses, to buy those which were specially equipped to accommodate transportation of the elderly and handicapped. Among the new specifications that were incorporated in the vehicle design were the placement of additional floor to ceiling stanchions along the aisle, increased lighting in the stairwells,

grab-rails near the front and rear stairwells and the designation of the first three longitudinal seats on the bus as reserved for the elderly and handicapped.

Special Non-Ambulatory Bus Service

Also resulting from the 1974 legal action was a MDOT commitment to create a specialized transportation system for handicapped individuals with limited movement capability. The guidelines used to determine eligibility for this program are:

- one who is confined to a wheelchair; or
- one who must use crutches, braces or walker to aid in walking; or
- one who is legally blind; or
- one who is unable to: stand for a 10 minute wait; walk for more than 50 yards; grasp a support rail; travel unescorted.

The State was awarded nearly $300,000 from UMTA to purchase ten vehicles specially equipped to transport wheelchair confined persons and to monitor and evaluate the use of such buses "in order to make recommendations for appropriate improvements in service for handicapped persons.[93]

In order to have the system operated on a private, non-profit basis (and thus save substantial labor costs, while qualifying for 16(b)(2) capital funds), MDOT and Lutheran Social Services (LSS) agreed to have the latter operate the system with MDOT providing the needed guidance. While detailed program design is still undergoing refinement, the system began operation in the late spring of 1977 and is operating essentially as follows:[94]

- it will be a modified demand responsive system with a dial-a-ride requirement of at least a 24 hour advance reservation
- only those individuals who are handicapped and who are unable to use the regular transit system because of their physical disability will be eligible to use the system
- all trip purposes are allowed but the system will be biased towards work, school and medical usage by encouraging service subscriptions

- the fare of 50¢ per ride reflects the nature of the service - public (justifying the low fare in relation to the cost of service) and specialized (thus the fare is higher than regular mass transit bus fare)

- administration by a private, non-profit organization allowing for 16(b)(2) capital funding and generally lower labor costs

- the service area will include Baltimore City proper and will be roughly contiguous with the Baltimore Beltway; actual service patterns will be determined by registration information and rider reservations

The State will assume the cost of any operating deficits providing needed subsidies under a three year operating agreement.

Rail Transit Vehicle and Station Specifications

Because the Metropolitan Baltimore rapid rail system requires federal funding, provisions for equal access to its facilities by the elderly and handicapped must be met. Ongoing planning has been taking these considerations into account, especially in light of recent issuance of UMTA planning and accessibility guidelines for rail systems.

Washington Metropolitan Area Transit Authority (Metro)

Metrobus and Metrorail Reduced Fares

Subject to the Federal regulations noted earlier, the Washington area public transportation system charges elderly and handicapped individuals half fare during non-rush hours (20¢) and full fare (40¢ or more) at other times. Qualification for eligibility is similar to that of the MTA. Senior citizens, with proof of age, may obtain an ID card at any WMATA Office or public library. Handicapped individuals must have their physician complete a WMATA form which they must return to the authority. A two-year photo-identification card is then issued.[95]

Transit Vehicle and Station Design Specifications

Metro transit vehicles have also begun to employ a priority seating designation for elderly and handicapped individuals. On Metrobuses, the priority seating area is the longitudinal seat directly behind the bus operator. On Metrorail vehicles, the longitudinal seats immediately to the right of the entrance door (as seen upon entering) constitute the priority seating area. Special physical design considerations, as such, have not been incorporated into current Metrobuses. Specific Metrorail provisions are primarily directed to facilitate access to the vehicle through special elevators and inclinators - and not to vehicle design itself. Wheelchair riders must remain in the aisles aboard Metrorail vehicles. Computerized fare collection measures will accept specially identified elderly, student and handicapped fare passes. Handicapped individuals (those not able to use the escalators) utilize their pass in connection with special elevators which travel from track to street level. Special access provisions for handicapped passengers were added to several transit stations as the result of a court order at a cost of $65 million after construction of the system had begun.

Garrett County Rural Transit Demonstration Project (MDOT)[96]

The Garrett County Rural Transit Demonstration Project began operation in January 1975 and represents the first pilot rural demonstration project in the State. Three 18 passenger buses built to specifications prepared by MDOT were purchased by the State and delivered to the Garrett County Commissioners. Two of the buses are used for daily runs. One operates in the northern part of the county, the other in the southern portion. The third vehicle is used as a back-

up vehicle and for special trips to the West Virginia Medical Center and Johns Hopkins Hospital. Drivers for the system are provided by the Department of Social Services' Work Incentive Program.

The Garrett Bus system operates on ten regularly scheduled routes, including local Oakland service, each operating on one or two specified days per week. The system covers approximately 90% of the primary travel routes and populated areas of the County. Riders are transported anywhere along the route. This service provides elderly individuals with easy access to medical, dental and other health facilities and services. Special provisions are not made for the physically handicapped. Evaluation and monitoring of the program is being conducted by MTA, the Public Service Commission and various Garrett County agencies and groups.

Anne Arundel County (EOC)[97]

The Anne Arundel County Economic Opportunity Commission (EOC) recently received a $250,000 grant under Section 147 of the Federal Aid Highway Act to fund a t o-year rural transit demonstration project in the southern portion of the county. Funds will be used to purchase and operate a human service oriented system of 10 vehicles (4 specially equipped minibuses; 4 station wagons and 2 regular vans). This system will partially replace the former Rural Community Bus Lines operation which covered much of the County's special transportation needs.

Small Urban Area Public Transportation Systems and Non-Metropolitan Areas Systems Planning Studies

The Public Transportation Development Division of the MTA administers the public transportation project of the Maryland Department of Transportation for the development and implementation of technical transit studies and capital grants in small urban areas throughout the State.

MDOT (Mass Transit Administration) has implemented an interim transit subsidy program for small urban area operations to assist them in financing operating deficits. A long range aid program is being developed.

During 1975, MTA awarded capital grants to the Washington County Transportation Commission in Hagerstown and the Allegany County Transit Authority in Cumberland.

Transit systems in each of these areas are being operated by the public agency involved and new buses, support equipment, and facilities have been obtained. MTA has provided technical aid and assistance to implement these projects and maintains close contact with their operations.

Technical studies to develop and improve transit throughout the State have been administered and/or guided by the MDOT. These activities included studies in Annapolis, Bowie, Cambridge, Greenbelt, Hagerstown, and Salisbury plus Cecil, Harford, Howard and Talbot Counties.

The Non-Metropolitan Systems Studies, as part of the development of an overall, financially realistic State Transportation Plan, will tend to focus more attention on coordinating detailed rural and small urban area transportation studies. Prime consideration will be given to highway movement, though other modes will be studied with equal importance to determine their applicability to rural areas.[98]

Howard County Public Transit

Howard County has begun a Public Transportation Study designed to assess the needs of Howard County citizens for mass transit service. Study emphasis will be placed on modes other than the automobile. Products of the Howard County Public Transit Study will be a five-year plan and a comprehensive assessment of the County's

public transit needs for the ensuing 10 to 20 year period.[99] A Howard County Public Transportation Board was recently established to advise, assist, monitor and evaluate public transportation planning and service provision efforts in the County.

The study will examine public transportation service alternatives and will expand upon existing public transportation systems in Columbia - the COLUMBUS and Dial-A-Ride systems - and the county services provided by the Howard County Community Action Council, The COLUMBUS operation is provided by the Columbia Association and is limited to the immediate vicinity of Columbia. Dial-A-Ride which is demand-responsive, also serves Columbia and is similar to a taxi service. The other service, provided by the Howard County Community Action Council, provides demand responsive service outside of Columbia for those unable to furnish their own transportation. The study will also examine special service provisions and will be coordinated with the UTPP Elderly and Handicapped Study.

Montgomery County Demand-Responsive System[100]

In addition to public transit service provided by Metrobus, Montgomery County operates community transit services under its Project TRIP (Transportation Improvement Program). These transit services include Dial-A-Ride and Shuttle Service Operations in the Gaithersburg and Takoma Park areas. The Gaithersburg Dial-A-Ride/Shuttle service, once discontinued due to the lack of patronage, has now been revived. The County's most popular operation is the TESS Loop Minibus System operating in East Silver Spring, Takoma Park and Langley Park. The TESS System is composed of approximately 20 nineteen-passenger minibuses charging a 25¢ one-way fare. Service will be coordinated and integrated with future Metrobus and Metrorail operations. Efforts are being made to orient the system more towards the transit needs of the elderly and handicapped.

In addition to the above services, Montgomery County operates a Transportation Information Center (TIC). Utilizing the TIC phone number, a resident may call in and request transit route, schedule and cost information for any public system operating in the County.

Human Service Agency Transportation Provisions

Human service agencies have experienced difficulty in fulfilling program objectives and effectively providing needed social services because often transportation to the service provider is inadequate or non-existent. These agencies have often had to develop their own transportation resources by either utilizing part of their program budget or by taking advantage of Federal program funds allotted for the specific purpose of transportation service (see Federal legislation). With the great number of human service programs in existence, a nearly equal number of efforts to provide special transportation are in operation as well. The number of these efforts combined with a lack of knowledge about their existence by the wider social service and transportation communities has made the compilation of comprehensive inventory difficult. Inventories, surveys and reports from several sources were used including: the Maryland Office on Aging: the Metropolitan Washington Council of Governments; the Interagency Committee on Specialized Transportation; the Health and Welfare Council of Central Maryland; the Baltimore City Department of Planning; and DSP research. While the inventory provides a quantitative assessment of agency activity, it does not reflect qualitative concerns. The degree of target group coverage cannot be shown nor can the results of fragmentation or coordination of transportation services be illustrated. Therefore, no detailed critical analysis can be performed. This should be a subject for further study, of course. A description is included which, in matrix form, breaks out transportation provisions by geographic area and by service characteristics. We have summa-

rized the various transportation provisions of human services agencies by county (see Table 8).

Passenger Bus Operations - Common Carriers Licensed by the Public Service Commission

The Maryland Public Service Commission (PSC) regulates all common carriers (those who are profit making ventures with scheduled, fixed-route service) in the State. These carriers include operations which are interstate, intrastate, local transit (small urban system), limousine service, worker transport, or recreational - in nature. Only one licensed carrier provides service which could be identified as being geared expressly towards the needs of the transportation disadvantaged.[101] Many of the remaining carriers provide through service in rural areas and areas with no public transportation per se. Table 9 identifies those carriers licensed and regulated by the PSC, noting their general service area, trip purpose and trip frequency.

Taxicab Operations in the State

As of June 30, 1975, there were 3036 taxicabs in the State given license tags by the Motor Vehicle Administration.[102] Table 10 provides a geographic breakdown of their number by County. Many human service agencies in the State, as part of their provision for transportation service in support of social services, employ the use of vouchers or tokens for both taxicab and bus operations. In earlier discussion, it was noted that the transportation disadvantaged found taxicab fare costs prohibitive in relation to only frequent or regular usage for basic needs. Fares may vary from county to county or area to area. For the most part, Public Service Commission fare rates are not regulated, but are set by the operator in consideration of his operating expenses, reasonable profit and competition. Various innovative operations involving taxicab use by the transportation disadvantaged will be discussed in a subsequent chapter.

Table 8
Inventory of Human Services Agencies in
Maryland Providing Some Form of Specialized Transportation

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Western Maryland					
Allegany					
Human Resources Development Commission	elderly, other uncounted riders handled, no handicapped provisions	regularly scheduled includes Cumberland, Westernport, Lonaconing, Frostburg, Cresaptown, Mt. Savage, Midland, Barton	regularly scheduled	Title III,VII, shopping, field trips	staff vehicles 4-15 psgr vans 1-9 psgr van
Health Department	elderly medicaid card holders only	Allegany County	n.a.	escort, emergency	staff vehicles, med. asst. cards for public service use reimbursement
Allegany Transit Authority					
Salvation Army	senior day care (elderly)	Cumberland and surrounding area			1-15 psgr van
Allegany County Crippled Children League	crippled and disabled under 21 years of age	Cumberland to Baltimore	on call	medical transportation to hosp.	1-9 psgr van
Garrett					
Comm. on Aging (Garret Bus System)	eligible elderly, some others uncounted	local Oakland Service, 10 regularly scheduled suburban routes, 90% of main roads and populated areas	regularly scheduled suburban routes 1 or 2 times per week	multipurpose	3-19 psgr buses

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Western Maryland (Con't)					
Garrett (Con't)					
Comm. Action Council	eligible elderly	primarily senior citizens centers in Krellins and Kitzmiller to Oakland and from Jennings to Grantsville or Oakland	on call throughout county primarily from senior citizen centers	health, social related	1-6 psgr jeep handicapped provision is coordinated
Washington					
Comm. Action Council	low income, public housing, eligible elderly (Meals on Wheels)	Hagerstown and adjoining rural areas	on call w/48 hrs. advance notice	medical	1-15 psgr van 1-automobile
Comm. on Aging (CoA)	eligible elderly only	countywide to congregate soc. serv. ctrs.	on call	nutrition, medical, social	2-12 psgr vans
CoA-Kiwans Club of Hagerstown	eligible elderly, some others handled	Hagerstown area	point to point taxi service	medical, social	2 taxicabs provide service
County Transportation Commission	reduced fares for elderly	Greater Hagerstown		multipurpose	full size buses
Rotary Club of Hancock	eligible elderly only	Hancock area-specific route	5 days a week from 10:30-1:00 P.M.	nutrition	1-11 psgr mini bus
Reeder Memorial Home	elderly, elderly handicapped (nursing homes)	Washington County	3 days a week	multipurpose	1 st. wgn., contract

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Frederick					
American National Red Cross	referalls from Dept. of Soc. Ser. & Health Dept.			medical transportation	1-9 psgr st. wagon
Comm. Action Agency	elderly, some others handled	transportation w/i a 75 mile radius of Frederick Co.	48 hrs. notice, on call 5-days a week thru central dispatcher in Fred. Co.	medical transportation	4 autos 2-14 psgr vans
County Comm. on Aging	eligible elderly	City of Frederick, Emmittsburg, Thurmont, Brunswick, Urbana, Woodsboro	on call in indicated areas	nutrition, 1 wkly shopping trip	1-12 psgr van 15-20 autos
Southern Maryland					
Calvert					
Commissioners of Calvert County	eligible elderly	four outlying county areas to Prince Frederick	regularly scheduled one day per week	multipurpose, personal service	1-40 psgr school bus, leased
Charles					
Commissioners of Charles County	eligible elderly	three outlying county areas to Waldorf	regularly scheduled one day per week to each of three county areas in sequence	multipurpose, personal service	1-44 psgr bus (Keiler Bus Service)
Accokeek Health Council				medical transportation	
Dept. of Soc. Services	eligible elderly	county-wide	on call	health, medical, social	1-18 psgr van, 1 personal auto, 4 autos-6 psgr
Spring Dell, Inc.	mentally retarded, physically handicapped clients	Charles County area (program related)	program services	social service	3-12 psgr vans

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Southern Maryland					
Southern Maryland (Con't)					
St. Mary's					
St. Mary's County Developmental Center	mentally retarded clients	St. Mary's County		program services	2-16 psgr vans, 1-12 psgr van
So. Md.-Tri County Comm. Action Comm.	eligible elderly	St. Mary's County		medical transportation	
Suburban Washington					
Prince George's					
County Division for Aging	eligible elderly plus	routes on county primary & secondary roads	regularly scheduled, limited demand responsive, M-F 8:30-4:30, some charters	multipurpose	14-36 psgr buses (1 spec. equipped for wheelchairs), 1-18 psgr minibus
American Cancer Society	cancer patients only	Prince George's County	demand scheduled, M-F, 9-5	medical	volunteer drivers
American National Red Cross	indigent	Prince George's County	demand scheduled, M-F, 9-4:30	medical, health, social service	2-9 psgr st. wagon 2-5 psgr sedans
Cerebral Palsy of Prince Geo. County	cerebral palsy individual who cannot use regular transit	Prince George's County	demand scheduled, M-F, 8:30-5	health, education medical, emergency	1-9 psgr minibus
Department of Health	elderly, cerebral palsy students	Prince George's County	regularly scheduled M-f, 7:30-3:30	education, health	4-9 psgr minibus 1-11 psgr van
CALL of Beltsville				emergency medical transportation	
Operation Brotherhood				emergency medical transportation	
County Housing Authority				multi-purpose, emergency housing assistance	1 vehicle

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Suburban Washington (Con't)					
Prince George's (Con't)					
City of Laurel	eligible elderly	Laurel		multipurpose	1-50 psgr bus
City of Colmar Manor	eligible elderly	Colmar Manor		multipurpose	1-11 psgr van
Montgomery					
City of Rockville	elderly	Rockville area	M-F	multipurpose	2-18 psgr vans
American Cancer Society	cancer patients	Montgomery County	M-F, 9-5	medical	varies w/60 volunteer drivers
American National Red Cross (Gaithersburg)	indigent, elderly	Upper Montgomery County	demand scheduled M-F, 8:30-4:30	medical, social services	1-9 psgr st. wagon 1-11 psgr van
American National Red Cross	indigent, elderly, handicapped	entire Metropolitan Area	demand scheduled M-F, 8:30-4:30	medical, social, recreational	1-4 psgr sedan 3-6 psgr st. wagon
Cerebral Palsy of Montgomery County	cerebral palsy individual not able to use transit	Montgomery County	6 AM-7 PM, M-F scheduled for school children, otherwise demand responsive	multipurpose	20-15 psgr minibuses specifically equipped for handicapped
Community Action Comm.	indigent	Montgomery County	M-F, 8:30-5, demand scheduled	medical, social service, special group trips by arrangement	1-9 psgr van 1-11 psgr van 1-16 psgr minibus
FISH (Olney, Potomac, Rockville, Rossmor)	indigent and elderly	respective communities listed	most services demand responsive, 24 hrs. 7 days/wk	medical, social, social services	volunteer drivers
HELP (Bethesda, W. Montgomery County, Damascus, Gaithersburg)	indigent, elderly, handicapped	respective communities listed	varies fron on call emergency only to 24 hrs. day, 7 days demand responsive	medical, social services	volunteer drivers

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Suburban Washington (Con't)					
Montgomery (Con't)					
Ironsides Medical Transportation Co.	handicapped primarily	entire Metropolitan Area	demand responsive 24 hrs., 7 days/week	multipurpose, mostly medical	4-specially equipped, 1 psgr van
Jewish Council on Aging of Greater Washington	elderly (55+)	entire Metropolitan Area	scheduled and limited demand responsive, 9-5 M-F, 9-9 M-Th, limited Sunday service	multipurpose	3-14 psgr minibuses (1 specially equipped)
Leisure World	residents only	Aspen Hill	7am-1030pm, M-F	multipurpose	2-18 psgr buses
Mid-Maryland Lung Association	indigent TB patients	Frederic, Howard, Mont. Counties	9-5, M-F demand responsive	medical	public transit fare
Commission on Aging	elderly (60+)	Montgomery Co.	8:30-5, M-F, scheduled and limited demand responsive	multipurpose	3-16 psgr minibuses
Project TRIP-TESS Loop	all	Langley Park, Takoma Park, East Silver Spring	7am-7pm, M-Th, 7am-10pm, F, 10am-7pm Sat.	multipurpose	20-19 psgr minibuses
Rehabilitation Transportation, Inc.	handicapped and elderly	entire beltway area	8-5 M-F demand responsive	medical, health	5 minibus/vans, spec. equipped, designed to carry one person
Rockville Church of Christ	indigent	Montgomery County	9-3 MWF	multipurpose	1-12 psgr van
St. Michaels Volunteer Center	indigent, elderly, handicapped	Takoma Park and Silver Spring	9-430 M-F, demand responsive	medical, shopping	27 volunteers

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Suburban Washington (Con't)					
Montgomery (Con't)					
TESS	indigent, elderly	Takoma Park and Silver Spring	demand responsive (830-5 Tu, Th, Fri) (830-9 M,W) (10-2 Sat)	medical, legal, social service	1-12 psgr van
Volunteers for Visually Handicapped	visually impaired	entire Metropolitan Area	demand scheduled 10-2 M-F, Special appts. other times	multipurpose	volunteers
Center for the Handicapped	physically, mentally handicapped	Mont. & Prince George's Cos.		multipurpose	3 st. wagons 21 vans
Montgomery County Dept. of Trans.	eligible elderly	Montgomery County	regularly scheduled + demand scheduled	multipurpose	2-18 psgr buses, 4-16 psgr buses 2 vans
County Association of Retarded Citizens	physically, mentally handicapped school population	Montgomery County	weekly	agency services	7-10 vehicles
Baltimore Metropolitan					
Anne Arundel					
Economic Opportunity Comm. (Rural Comm. Bus Lines)	eligible elderly, others	southern and northwestern Anne Arundel County	-specialized daily charter, fixed route northern sector to transport Foster Grandparent recipients -fixed routes and schedules, southern and northwestern sectors for general purposes	multipurpose, medical	5-9 psgr st. wagons 2-40 psgr buses 1-18 psgr bus

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Baltimore Metropolitan (Con't)					
Anne Arundel (Con't)					
Economic Opportunity Commission (Con't)			-flexible routes and schedules to all county and city medical facilities		
Nutrition Program for the Elderly	eligible elderly only	Glen Burnie to Annapolis	5 days a week, scheduled, special shopping trip Thursday	nutrition shopping	2-15 psgr maxiwagons
CASOS Club	elderly, indigent	Anne Arundel County	weekdays	social, recreational	2 vehicles
Dept. of Social Services	indigent, clients only	Anne Arundel County	weekdays	health, recreational	vouchers for public transit
Family and Children's Society	elderly, indigent, youth, (Clients only)	Anne Arundel County	weekdays	health, recreational	agency vehicles
FISH (Annapolis)	elderly, indigent, youth	Anne Arundel	weekdays	health, medical	volunteers
Anne Arundel General Hospital	indigent clients only	Anne Arundel County	for hospital service	medical, health	
Health Department	indigent	Anne Arundel County		agency service related	
Md. Chapter Muscular Dystrophy Assoc.	low income clients	Anne Arundel County		medical, recreational	agency vehicles, tokens for public transit
United Cerebral Palsy of Central Md.	clients only	Anne Arundel County	6 days/week	health, recreational	agency vehicles, tokens for public transit

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Baltimore Metropolitan (Con't)					
Anne Arundel (Con't)					
YMCA	low income children	Anne Arundel County		social, recreational	
Providence Center	mentally handicapped children (clients only)	Anne Arundel County	weekdays	social, recreational	3 vans 11 buses
Baltimore County					
Baltimore Assoc. of Retarded Children	mentally retarded	Baltimore County	weekdays	multipurpose	3-9 psgr vans, contract services
Dept. of Social Services	all disadvantaged	Baltimore County	weekdays	health	use of tokens, vouchers and shared serv.
Stella Maris Hospice	aging service group			hospital related	2 vehicles
FISH (N. Balto. Co.)	low income, youth, others	Northern Baltimore County	weekdays	multipurpose	use of volunteers, shared service
Health Department	medicaid	Baltimore County	weekdays	health	shared service
Prince of Peace, Lutheran Church, Rosedale	eligible elderly, some others	Community Area	on call, emergency	emergency	8 autos w/volunteers drivers
Lions Club	elderly	Baltimore County	on call	medical	volunteers
Human Resources Development Agency of Baltimore County	elderly	Baltimore County			2 vehicles
Catonsville Community College	elderly	local area	on call, when available	nutrition	1 vehicle

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Baltimore Metropolitan (Con't)					
Carroll					
Carroll County Senior Overland Service	eligible elderly	countywide	on call, 5 days/week	multipurpose, medical	1-11 psgr minibus
County Commission on Aging	eligible elderly (Title VII)	service sites	scheduled nights	nutrition	1 school bus (contract)
County Association of Retarded Citizens	physically-mentally handicapped				14 buses, 3 vans
Springfield Hospital	elderly	Carroll County		social service	
Other Services Provided (no information): FISH, Cancer Society, DESS, Homemakers					
Harford					
County Commission on Aging	eligible elderly	Bel Air, Dublin, Havre de Grace, others	scheduled route, 5 days 10-3, demand responsive other times	primarily nutrition, other purposes include health, shopping	1-13 psgr minibus volunteers 1-7 psgr van
County Health Department	eligible elderly	countywide	6 days/week	medical, health	taxi, bus voucher service
Department of Social Services	eligible elderly, indigent	countywide	5 weekdays (with 3-7 day prenotice)	multipurpose	3 autos
Harford Center	mentally, physically handicapped	for Harford Center	weekdays	health, recreation	11 small buses, 3 wagons
FISH					

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Baltimore Metropolitan (Con't)					
Howard					
Community Action Council	low income, elderly, disabled	countywide	demand scheduled, 5 days a week, occasional weekends	social services, medical, shopping	1-11 psgr van, 5-9 st. wagons, 2-8 psgr van (1 spec. equipped)
Howard County Sheltered Workshop	disabled, retarded	agency service only	weekdays	agency service only	2-maxivans 1-st. wagon
Commission on Aging	eligible elderly	county program sites	regularly scheduled	multipurpose	1 st. wagon
Association for Retarded Citizens	mentally, physically handicapped youth	agency services only	weekdays	agency services	4 vehicles, 1 school bus (contract)
Children's Aid & Family Services	children	countywide	weekdays		agency vehicles
Department of Social Services	elderly, indigent	countywide	weekdays	health	shared services, agency vehicles
Drug and Alcohol Abuse Center	clients only	agency purposes	weekdays	agency purposes	agency vehicles
Head Start	eligible youth	countywide	weekdays, during program operation	classroom transportation	contract w/school bus operator
Health Department	elderly, low income	countywide	weekdays	health	agency vehicles
American Nat'l Red Cross	elderly, low income, children	countywide	weekdays	health, social	agency vehicles
Baltimore City					
Lutheran Social Services	eligible elderly and handicapped	Metropolitan Area inside Beltway		multipurpose	10 specially equipped full size transit buses

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Baltimore Metropolitan (Con't)					
Baltimore City (Con't)					
Jewish Community Center	eligible elderly	Pikesville, Northwest Balto. City	4 days per week, scheduled	recreation, social	1-36 psgr bus 1-8 psgr van
Northeast Community Organization		Northeast Baltimore			
Health Department	eligible elderly		7am-6pm by appointment, 36-48 advance reserve	medical, health	3-6 psgr autos 6-12 psgr vans
Inner City Community Mental Health Center					3-6 psgr autos 1 station wagon
Lafayette Square Multi-Service Center	eligible elderly	Lafayette Square Community	on call 5 days a week w/24 hr. lead time	health, medical	1-9 psgr minibus
East Baltimore Medical Plan					1 van
Community Concern Corporation	eligible elderly, handicapped	Metropolitan Baltimore	demand-scheduled	health, medical, social, recreational	1-28 psgr bus 1-40 psgr bus
Cherry Hill Coordinating Council					1 minibus
Provident Neighborhood Health Center					4 vans
Levindale Hospital					2 vans
North Charles General Hospital					1 van

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Baltimore Metropolitan (Con't)					
Baltimore City (Con't)					
Urban Services Agency (Neighborhood Trans. Inc.)	eligible elderly	Baltimore City	generally regularly scheduled, 5 days a week	senior citizen day care	15-12 psgr minibuses 2-35 psgr school buses
Maryland Rehabilitation Center				employment, social recreational, medical	1 minibus, 1 van
Baltimore Goodwill Industries					2 vans, 1 wagon
Mt. Wilson Hospital					1 minibus
Linwood Children's Center					1 van
U.S. Public Health Service Hospital					1 auto, 1 station wagon & 1 ambulance
American National Red Cross					10 wagons, 2 minibuses
Keswick Home					1 minibus, specially equipped
Department of Social Services					approximately 10 City autos
Family-Children's Center					2 minibuses, 1 auto, 1 station wagon
Spring Grove Hospital					7 cars, 4 vans, 4 st. wagons, 3 buses

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Baltimore Metropolitan (Con't)					
Baltimore City (Con't)					
Crownsville Hospital					8 autos, 2 station wagons, 1 minibus, 3 buses
J.F. Kennedy Institute					1 van
Muscular Dystrophy Assoc. of Maryland					1 van
Rosewood Hospital					4 autos, 1 wagon, 5 buses, 6 vans, 2 minibuses
Greater Baltimore Medical Center					1 minibus
Md. Children's Aid & Family Service	others (elderly), indigent				4 autos
United Cerebral Palsy of Central Md. (Pikesville)	mentally, physically handicapped children	Baltimore Co.	M-Sat, days & nights	education, recreational	7 vans, 2 psgr buses, specially equipped
Balto.-Central Md. League of Crippled Children					3 vans, 1 wagon
West Baltimore Comm. Health Corp., Inc.	indigent, elderly, handicapped	Baltimore City (S) & (W)	weekdays	medical, health, nutrition	1-8 psgr van 1-9 psgr wagon

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Upper Eastern Shore					
Cecil					
Upper Shore Aging (coordinated with Workshop for the Blind)	eligible elderly	Cecil County	on demand	multipurpose	2-12 psgr vans
Caroline					
Department of Social Services	eligible elderly (Title XX), disabled	Caroline County		social services	5 vehicles
Upper Shore Aging	eligible elderly	Caroline County	on demand	multipurpose	2-12 psgr vans
Kent					
Upper Shore Aging	eligible elderly	Kent County	on demand	multipurpose	2-12 psgr vans
Queen Anne's					
Upper Shore Aging	eligible elderly	Queen Anne's County	on demand	multipurpose	2-12 psgr vans
Talbot					
Upper Shore Aging	eligible elderly	Talbot County	on demand	multipurpose	2-12 psgr vans
Lower Eastern Shore					
Wicomico					
Blind Industries and Services	blind	Wicomico, Worcester, Somerset	primarily fixed route, 7 days some demand responsive	multipurpose	3-15 psgr vans
Lower Shore Sheltered Workshop	handicapped	rural areas		multipurpose	3 vehicles
Holly Center	elderly, handicapped	Wicomico County	daily, weekends	multipurpose	1 spec. equipped van
Shore Up!	eligible elderly	countywide	sequential routes radiating from Salisbury, 10-230 pm, 5 days/week	multipurpose	4 vehicles (1-10 psgr minibus, 1-12 psgr minibus, 1 van, 1 food carrier)

Table 8 (Con't)

Region County Agency	Service Group	Service Area	Service Availability	Service Purpose	Vehicle Transportation Service Characteristics (provision for handicapped are noted)
Lower Eastern Shore (Con't)					
Wicomico (Con't)					
Wicomico Teen Adult Center	adult mentally retarded	Wicomico County		medical, health, social	1 van, carrier contract
Worcester					
Shore Up!	eligible elderly	countywide	on call, 24 hour advance notice	multipurpose	1-12 psgr van, 2-10 psgr vans
Somerset					
Shore Up!	eligible elderly	countywide	regular daily and demand responsive service	multipurpose	2-12 psgr vans, 1 food carrier, 2-10 psgr van
Somerset Developmental Center	handicapped	Princess Anne, Crisfield	regular fixed routes	health, social services	1-12 psgr van
Dorchester					
Dorchester County Community Development Corp.	eligible elderly, eligible youth	four areas of the county	on call, but scheduled regularly 1 day per week, for specific areas (four) of the county	multipurpose	1-12 psgr van, 1-18 psgr bus, 1-7 psgr wagon, 2-9 psgr vans
Dorchester County Department of Social Services	eligible elderly	countywide	on call when possible	multipurpose	1 automobile

Source: Compiled by Maryland Department of State Planning from information obtained, in part, from the Maryland Office on Aging, Health and Welfare Council of Central Maryland, Washington Area Council of Governments, Baltimore City and the Regional Planning Council.

Table 9
Passenger Bus Operations Licensed by the
Public Service Commission

Region Operator	Service Characteristics
Baltimore Metropolitan	
Airport Transportation Service, Inc.	daily interstate airport limousine service from York, PA. to BWI
Arundel Bus Company	local public transit operations for the Annapolis area
F.F. Brooks	daily (5) work-related transportation between Baltimore and Havre de Grace
J.C. Caffrey	daily military-oriented transportation from Port Deposit to BWI
Chauffer Services, Inc.	daily work-related transportation service to airline crews
L.L. Ciufo	daily (4) work-related employment to Bata Shoe (Harford County)
Clydes Chartered Bus Service, Inc. (IS)	daily service between Baltimore-Westminster-Gettysburg
Columbia Park and Recreation Assoc., Inc.	daily (6) community transportation service in the Columbia area
Commercial Credit Equipment Company	company operated van pool
Community Concern Corporation	daily (5) multipurpose transportation for disadvantaged in Baltimore
Cunningham, J.A.	daily (5) bingo operations in Baltimore area
Dee Jay Bus Service, Inc.	daily bingo operations in Baltimore area
J.C. Dougherty	daily (4) work-related transportation to Bata Shoe Co., Harford County
P.L. Edwards	daily (5) work-related transportation between Bel Air-Aberdeen-Edgewood
J.G. Gibson	daily bingo operations to Brooklyn (Baltimore City)

Table 9 (Con't)

Region Operator	Service Characteristics
Baltimore Metropolitan (Con't)	
W.F. Gordon	daily bingo operations to Glen Arm, Maryland
Intercounty Bus Lines, Inc., (IS)	daily (5) bus service between Baltimore and Lancaster; weekends-Lancaster-Havre de Grace
Kenwood Bus Company, Inc.	bingo operations seven days a week in Baltimore area
E.B. Martin	daily (4) work-related service to Bata Shoe Co., Harford County
Maryland State Department of Education	daily (5) work-related service between Baltimore and BWI
McMahon Transportation Company	daily (6 days, no Sunday), intercounty service between Bel Air and Baltimore
J.J. McMillan	daily local service between Aberdeen and APG (Army contract)
Parker Bus Service, Inc.	daily (5) work-related service for Johns Hopkins Institutions
P&T Bus Co., Inc.	daily bingo operations, Baltimore area
Red Lion Bus Co., Inc. (IS)	daily (5) bingo operations between Red Lion, PA and Hampstead
H&D Reeves	daily (4) work-related service to Bata Shoe, Harford County
Reliance Motor Coach, Inc. (IS)	daily (5) service between Railroad, PA and northern Baltimore County
J.E. Rice	daily (5) commuter service between Columbia, Md. and Social Security Complex
Rohrbaughs, Inc.	daily (5) local service between Emmitsburg, Thurmont and Hampstead
Rural Community Bus	daily (6) local service for NW&S Anne Arundel Co. (Will begin operations as Rural Demo Proj. 1-77)
K. Steck	daily (4) work-related service to Bata Shoe, Harford County
Thomas Motor Tours, Inc.	daily bingo operations in Southern Anne Arundel County

Table 9 (Con't)

Region Operator	Service Characteristics
Baltimore Metropolitan (Con't)	
R&B Zimmerman (IS)	daily service between Gettysburg and Hanover, PA and Reisterstown and Baltimore, Maryland
Washington Suburban and Southern Maryland	
Atwood's Transport Lines, Inc.	coordinated service with Greyhound between Washington and Leonardtown and Lexington Park
Baltimore-Solomons Bus Lines, Inc.	daily (5) service between Washington and Solomons
Blue Lines, Inc.	daily (5) commuter service between Brunswick and Washington
Carters Bus Service, Inc.	daily (5) health-related transportation from Ellicot City-Columbia area to Naval Medical Center
Colonial Transit Company, Inc.	daily (5) commuter service from Indianhead to Washington
Dawson's Charter Service, Inc.	daily bingo operations between Washington-Gaithersburg-Sandy Spring
W.F. Fields	daily (5) commuter service to National Security Administration
Grayline, Inc.	daily (5) sightseeing trips between suburban Maryland and Washington
H&M Bus Service	daily (5) work-related transportation to Indian Head, Maryland
M.E. Mullenax	daily (5) commuter service between Washington, D.C. and Pomonkey, Maryland
W.M.A. Interstate Motor Lines, Inc.	daily local service between Washington, D.C. and northern Calvert County
Western Maryland	
Allegany County Transit Authority	local public transit operations for the Cumberland area
Blue and White Lines, Inc. (IS)	Sunday service between Altoona, PA and Cumberland

Table 9 (Con't)

Region Operator	Service Characteristics
Western Maryland (Con't)	
E&R Eberly (Valley Bus Lines	three-day service between Chambersburg, PA and Hagerstown
Garrett Bus System	local public transit operations in Garrett County and around Oakland
Litten & Litten Motor Lines, Inc.	one day service between Brunswick and Hagerstown
Paul Henry Air Freight, Inc.	daily airline limousine service for Hagerstown
M.W. Rotruck	daily (5) work-related service to Westvaco Paper Co., Allegany County
Somerset Bus Company	one day service between Somerset, PA and Cumberland, Maryland
Washington County Transportation Comm.	daily (6-no Sunday) local service in Washington County
Willett's Travel, Inc.	three-day bingo operations in Barton, Maryland
Lower Eastern Shore	
R.J. Bailey	work-related transportation, Wicomico County
H.F. Chapman	work-related transportation from Snow Hill to Eastern Shore of Virginia
J.W. Drummond	daily (5) work-related transportation between Bishop, Maryland and Eastern Virginia Shore
Golden Pride Processors, Inc.	poultry operations
Elwood and Gray	daily (5) work-related transportation between Elliot and Cambridge
Henson Aviation, Inc.	daily shuttle service between Salisbury and Ocean City Airport
Hopkins Motor Coach, Inc.	3-day local bus service between Crisfield and Salisbury
Mayor and City Council of Ocean City	daily local transit operations for Ocean City

Table 9 (Con't)

Region Operator	Service Characteristics
Lower Eastern Shore (Con't)	
Perdue, Inc.	daily worker service for Perdue Farms, Salisbury area
Upper Eastern Shore	
Crab Claw, Inc.	seasonal sightseeing transportation around St. Michaels
Mandrell Motor Coach, Inc.	daily (5) work-related service from Denton to Dover, Delaware
O'Neals Tours, Inc.	daily (5) local service between Elkton, North East and northern Delaware
Pinkett's Shorelines, Inc.	work-related service between Federalsburg and Atlanta, Delaware
Frederick	
B.D. Gladhill (Frederick Transit Co.)	local public transit operations from the Frederick area
Lincoln Bus Lines	one day service between Hanover, PA and Frederick
Multi-Regional	
American Bus Lines, Inc.	Safeway System interstate service from Washington, through Baltimore to PA
Baltimore and Annapolis Railroad Company	limited service between Ft. Meade, Laurel and Washington and between Baltimore, Annapolis and Ft. Meade
Capitol Bus Company	daily Trailways service between Baltimore - Harrisburg - New York
Carolina Coach Company	daily Trailways service covering Baltimore to local Eastern Shore routes
Eyre's Bus Service, Inc.	daily (5) commuter service between Baltimore - Columbia-Washington
Fairwind Travel, Inc.	daily sightseeing runs
C.D. Ford	daily visitor service to Hagerstown-Jessup Correctional Centers

Table 9 (Con't)

Region Operator	Service Characteristics
Multi-Regional (Con't)	
Greyhound Lines, Inc.	regularly scheduled interstate and intrastate bus service
Interstate Limousines, Inc.	limousine service
J.G. Exec., Inc.	daily airline limousine service between Dover, Delaware and BWI
Safeway Trails	daily local and interstate service
Salem Transportation Co.	special demand trips to Atlantic City, NJ
State Aviation Administration	daily limousine service between Washington, D.C. and BWI
Wolf's Bus Lines, Inc.	daily (5) service from York, PA into Maryland

Notes

- Daily, unless otherwise indicated by a number (of days) in parentheses, represents seven day service.
- BWI stands for Baltimore-Washington International Airport.
- IS stands for Interstate.
- Multi-Regional indicates service occurs between multiple regions of Maryland or between multiple regions of Maryland and out of State points.

Source: Prepared by the Maryland Department of State Planning from information supplied by the Maryland Public Service Commission

Table 10
Geographic Analysis of the Availability of
Taxicab Service in the State of Maryland

Jurisdiction	Number of Licensed Vehicles Serving Area
Allegany	54
Anne Arundel	186
Baltimore City	961
Baltimore County	490
Calvert	1
Caroline	3
Carroll	14
Cecil	24
Charles	11
Dorchester	24
Frederick	38
Garrett	6
Harford	80
Howard	22
Kent	0
Montgomery	411
Prince George's	498
Queen Anne's	7
St. Mary's	10
Somerset	15
Talbot	12
Washington	57
Wicomico	95
Worcester	15
Out-Of-State	2
Total	3036

Source: Information from the State Motor Vehicle Administration, pertaining to vehicles registered as of June 30, 1975 in Maryland.

While it appears that a great variety of efforts are currently underway, provisions for the transportation of the disadvantaged in Maryland are still inadequate in a great many areas. Additionally, existing efforts must be continually evaluated to assess their effectiveness in meeting needs and determine their optimum utilization of existing resources. A more active involvement in meeting public and special group transportation needs by the private sector would appear warranted given the amount of resources at its disposal and the strong intent of Federal policy to encourage private sector inclusion through participatory incentives. The private sector is still a relatively untapped resource in Maryland.

The following chapter discusses additional opportunities available which could enhance the mobility situation of the disadvantaged in Maryland. Included in this discussion is an overview of developments at the Federal level - a level at which directed leadership and the coordination of programs must originate if actions by State and local governments and the private sector are to be effective.

CHAPTER IV
NEW DIRECTIONS

Introduction

An increased awareness of the mobility needs of the disadvantaged combined with the impact of the current inhibitive energy and economic conditions have pointed clearly to deficiencies which must be addressed in the area of transportation for the disadvantaged. This section outlines the various types of policy and program responses to the above problem by noting some of the technological and institutional approaches now being pursued. This information has been extracted from the variety of studies that have been investigated. The intent is not to offer these citations as the sole approaches to meeting transportation needs but to offer them as areas which could be pursued for further study. There is also discussion of the various constraints which have hampered and often continue to hamper efforts to provide effective service and the attempts which have been made to ameliorate those problems. Discussion begins with an examination of the issue of coordination of programs and projects, at the Federal level. It is at this level that effective direction must originate in order to foster the most beneficial impact at the State and sub-state levels. Finally, the potential application of various approaches in the provision of service for particular areas of Maryland is discussed.

Responses-Movements Towards Coordination at the Federal Level

In earlier discussions, it was noted that quite often public transportation was either inadequate or non-existent to serve the mobility needs of the various disadvantaged groups. At the same time, there is a great proliferation of Federal categorical human service programs, each with inherent program elements designed to provide supportive transportation. Often the human service program transportation activities are not integrated with public transit service where it is available. These programs, likewise, are often not coordinated among themselves resulting in duplication of effort, inefficient use of resources and a reduction in their ability to reach the total target population. One report notes:

> At least 26 Federal Statutes have authorized 93 Federal Programs which provide for or allow transportation support for social service programs. In addition to those funded by the Federal government, other State, regional, local and private or volunteer programs provide transportation supporting social service programs ... 4000 geographic program areas have been recognized under 24 Federal programs. Using the 38,000 places which are eligible for Federal general revenue-sharing or the 80,000 units of local government which have 975 Federal assistance programs available to them, as a measure of magnitude of the problem, suggests that thousands of uncoordinated transportation facilities are operating inefficiently .. denying urgently needed transportation ... legislative categorization of programs is a major obstacle ... Seventy Congressional committees deal with some aspect of transportation.[103]

A host of factors combine to make coordination and consolidation a difficult task and include statutory, regulatory, formal policy and operating constraints. Problems include: constrictive eligibility guidelines, questions of fiscal responsibility, inconvenient geographic location, incompatible scheduling, franchise and labor negotiations and agency "turf" or autonomy issues.[104]

Suanne Brooks of the Department of Health, Education and Welfare has identified the following as actions which must take place before effective communication can occur:[105]

- a national commitment to coordinating and/or consolidating human services transportation voiced at the cabinet level;
- a comprehensive study of Federal budget outlays for human services transportation;
- a national task force appointed to study and report needed changes in statutory and regulatory, policy and operational constraints;
- congressional study and action to ease present barriers to coordination;
- more flexibility allowed at Federal, State and regional levels to deliver service rather than meet strict guidelines;
- creation of Federal interdepartmental committees to deal with problems among agencies;
- closer coordination of public transit systems with social service providers;
- active efforts at coordination by local providers; and
- horizontal and vertical arrangements between all levels of government to carry out coordination.

There is evidence to indicate that the Federal level is now responding to the need for better coordination.[106] Several interagency agreements for coordination of programs and resources have been initiated. Most notable is that between the Administration on Aging and the Urban Mass Transportation Administration. Additionally, UMTA's 16(b)(2) program urges that coordination among varying need groups occur not just a single agency use of available transportation.[107] Proposals to sustain small town transportation programs by coordinating social service programs with what little available area public transportation exists may prove to be beneficial to both the general public and the transportation disadvantaged. The Federal Office of Human Development (HEW) recently initiated a sub-state level demonstration program designed to coordinate the provision of transportation among four or more local social service agencies involved with Federal human service programs.[108] The Federal Regional Council (FRC) for the Maryland area has just recently begun to investigate transportation issues affecting Federal programs dealing with specialized transportation in the State and the region.[109] The FRC has found that workshop sessions are an effective approach to getting down to nuts and bolts problem areas and linking these with possible changes in Federal requirements, regulations and practices.

Anticipated Federal Legislation and Study

It should be noted that dual House and Senate bills are pending in Congress which would serve to extend federal assistance to rural areas for the operating costs of rural public transportation systems.[110]

Senate Bill 208, which proposes provision of operating subsidies for non-urbanized areas, is under consideration by the Senate. Legislation similar to the Senate version and last year's House Resolution 3155 is expected to be considered in the House Committee on Public Works and Transportation.[111] At

this time, it is unclear as to how SB 208 and expected House versions would effect urban and rural systems relationships, how 16(b)(2) might be altered and how the role of non-profit organizations would be affected. Whether or not a version of the bill becomes law will depend upon Congress' 'wait and see' assessment of the cost and effectiveness of ongoing demonstration programs (particularly cost). But the importance of obtaining operating assistance is underscored by the fact that local transit operations devote up to 80% of their budget to operating expenses. Most often, the major problem involved in service provision is not obtaining capital costs but is in covering continuing labor, maintenance and fuel costs.[111] It is also generally felt that some form of Federal operating assistance to rural public transportation will be necessary if these systems are expected to survive.

More renewed interest in rural areas is demonstrated by many persons within the transportation sector calling for an expanded Federal ground transportation agency to replace the present framework. Presently, the Urban Mass Transportation Administration handles rural projects as well, leaving no one expressly responsible for the planning and coordination of rural transportation programs.

There is increased pressure on Congress to establish a committee to investigate the issues involved in the coordination of transportation services, particularly those of social service programs. Several sets of subcommittee hearings on the plight of the aged have outlined the need for coordinated services. Efforts by the Federal Regional Councils are beginning to explore the problems.

There will be continuing pressure for transportation planning legislation and regulation as legislators push for assured provisions of meeting the mobility needs of elderly and handicapped individuals in programs requiring the use of Federal funds.

Recent Congressional hearings highlighted the variety of problems associated with delivery of transportation services to the elderly. One of the major problem areas noted was the lack of continuity and certainty associated with certain Federal grant and demonstration programs. Title III funds (available under the Older Americans Act), which are earmarked for transportation purposes, have a specific three-year limitation on funding. After the third year, the community must find its own funding sources or suffer the consequences of program phase-out. Total costs of operation which have often increased significantly during the demonstration period because of inflation and prospects for expanded service must be assumed by the local group. It is important, therefore, that the local jurisdictions begin early to identify and arrange continued funding sources and frameworks. There is some evidence to indicate the Administration on Aging will begin examining the extension of its three-year limit.[112]

Legislation was introduced in Congress in 1976 (5.2876, HR 9152) to permit federally owned vehicles declared as excess to be used for a broader range of purposes than now presently allowed. During fiscal year 1975, more than 5,400 vehicles were disposed of by the Office of Federal Property Assistance in the Department of Health, Education and Welfare. Unfortunately, these vehicles were restricted to use for education, health or civil defense purposes.[113] This meant that usually only Title VII nutrition projects located in eligible health and educational institutions could participate. Broadening the range of uses to other disadvantaged groups would provide additional resources and opportunities.

The Federal Urban Mass Transportation Administration will continue to evaluate its policies and programs governing more accessible full-size transit buses between the forces of available technology, special interest group pressure, legal challenges and the competitive marketplace. Recent decisions by U.S. Department of Transportation Secretary Brock Adams, have mandated that all new

public transit buses to be purchased with Federal funds and advertised for bid after September 1979 have effective floor heights of not more than 22 inches.[114] This decision reflects $27 million Federal investment in advanced transit vehicle research and design and incorporates a substantially lower floor height and a front end kneeling feature. Until the new Transbus vehicles are available, manufacturers will be required to offer optional wheelchair lifts for existing buses and local transit authorities must either purchase lifts or provide alternative special services.

Different Service Concepts

While Transbus and retrofitted public transit buses promise to ease the mobility difficulties of many elderly and handicapped individuals, the use of full-sized transit buses may not be practical nor affordable for many smaller communities. Full-sized buses, to operate most efficiently, are used in higher density areas on a fixed-route, fixed-schedule basis. A variety of alternative service concepts exist (see Table 11). Various combinations of vehicle type service coverage and frequency can be employed to meet service needs and remain cost affordable. Summarized below are the primary concepts in service currently being employed:

A. Dial-A-Ride services are of a demand-responsive nature. System users normally are required to call in advance of actual use, generally two to forty-eight hours prior to actual use. Dial-a-ride systems have been employed in several different environments: lower capacity and limited-trip configurations have been used when the system operates in a low density residential area or when user eligibility is restricted to specific groups; in higher density areas, vehicles with moderate capacity arrangements have been employed. The operations of dial-a-ride systems often have the characteristics of a regular route. While some of the system is flexibly-routed in lower density residential sections, the major portion of the system, and a key to its improved efficiency of operation, is that part which involves regular routing and regular patronage. Dial-a-ride service can be operated with a fixed or limited number of destinations, or with unlimited on-demand destinations.

TABLE 11

Service Concepts

LEGEND

■ PRIMARY OCCURENCE

O SECONDARY OCCURENCE
Combination occurs to a lesser degree

SERVICE CHARACTERISTICS

SERVICE SYSTEMS	REGULAR, FIXED ROUTE	FLEXIBLE ROUTE	DOOR-TO-DOOR	FEEDER	SHARED RIDE	INDIVIDUAL RIDE	ADVANCE NOTICE	SHORT NOTICE	TRANSIT AUTHORITY	INSTITUTIONAL PROVIDER	PRIVATE PROVIDER
CONVENTIONAL PUBLIC TRANSIT	■				■			■	■		
RESERVATION/SUBSCRIPTION SERVICE		■	■	O	■		■		O		■
TAXI		■	■	O		■		■			■
TAXI DEMONSTRATION-SUBSIDIZED		■	■	O	■			■			■
CHAUFFEUR & LIMOUSINE SERVICE		■	■			■	■				■
PRIVATE, NON-PROFIT ORGANIZATION	■				■	O	■			■	O
HUMAN SERVICES PROGRAM PROVISIONS	■				■		■			■	
INTEGRATE SYSTEM – TRANSIT FEEDER BUS	O	■		■	■			■	■		
VOLUNTEER DRIVERS		■	■		O	■	O	■			■

Source: Maryland Department of State Planning

An evaluation of dial-a-ride services reveals mixed-reactions to their effectiveness.[115] They may offer the only viable service alternative to smaller communities, owing to the expense of conventional transit. Dial-a-ride systems cannot be expected to operate at a profit, however. In most cases, subsidization in addition to user-fare charges has been required to sustain operation of the system. While many dial-a-ride systems have failed, generally because of escalating operating costs, and poor patronage, proper management can adapt the system to changing service needs. Adjustment of the demand-responsive and fixed-route elements according to demonstrated service demands is an important element in preserving the system's fiscal integrity. It has also been observed that dial-a-ride service has not necessarily reduced the level of energy consumption or the total number of trips.[116] These observations relate to system users who also use their automobiles and necessarily to transit-dependent individuals. In addition, the use of a dial-a-ride system has also been seen as an effective interim service concept prior to the introduction of conventional public transit in growing areas. Thus, dial-a-ride can be characterized as 1) a specific service system for special need group users, b) a general public transit system for small communities and c) and element of a larger transit system performing feeder operations connecting outlying, unserved or special need groups with the conventional transit system.

B. Subscription Service provides transportation on a regular, repetitive basis with system users required to reserve service in advance. Usually, service is provided at specific times for specific purposes. For example, users may subscribe for daily home to work and back service on specified days of the week or senior citizens may subscribe to regular weekly services for social or shopping trips. This type of service has advantages for the operator for it can be scheduled in advance and the cost of providing the service is usually covered by user fares. Subscription services can be operated with the use of almost any size vehicle depending upon the service demand. Usually there are a minimal number of points of origin at which users assemble and one primary destination. Capacity must be reached consistently if the cost per user/trip is to be kept within an acceptable range.

C. Modified Fixed Route Service represents a compromise approach to the fixed route and demand responsive types. By allowing a certain flexibility in this approach, the operator is able to deviate from a fixed route and pick up a mobility-constrained rider (one who encounters difficulty getting to fixed line pick-up points). The operator may then return to a fixed route for users not so constrained, thus avoiding the additional costs associated with a totally demand-responsive system. However, it should be pointed out that such deviation in routing will result in increased travel times and schedule fluctuation.

D. Conventional Taxi Service presently offers a door-to-door capability by direct telephone contact or by hailing from the street. Depending upon the time of day, location and weather, taxi service is usually available after reasonably short waiting periods, frequently no more than a half an hour. Taxis are usually autos specially equipped with two-way radios and having a maximum capacity of four to five passengers. Depending upon the jurisdiction in which taxis operate, the operator may be prohibited from allowing ride-sharing. In most Maryland jurisdictions, additional passengers, up to 4, are allowed if the initial passenger has no objection to sharing. A distinct difference between conventional taxi and dial-a-ride service is the latter's long lead time on service. The former, when effectively used, can offer a significant para-transit option for disadvantaged travelers. While many may find that their total transportation needs cannot be met by taxi service because of its high cost, some innovative arrangements have been employed which reduce the cost to the traveler. Human service agencies frequently utilize taxi systems for their clients' program needs providing the clients with chits or tokens and later reimbursing the taxi operator. Other arrangements have provided direct subsidies to taxi operators so that disadvantaged riders may be offered reduced, fixed-fare service.[117] In transportation programs involving Federal funds, it has been a continuing UMTA policy to encourage the participation of private enterprise.[118] Taxicabs and other common carriers will increasingly be called upon to fulfill supplementary service needs as part of the overall transportation program for the disadvantaged.

E. Specialized Handicapped Service can be an element of any of the above service types, with the possible exception of taxicabs, and involve the modification of existing vehicles or purchase of new vehicles, specially equipeed for handicapped use. Generally, this special equipment takes the form of lifts or ramps for wheelchairs, lowered steps and improved seating safety precautions. While specially-equipped vehicles may be integrated for use with non-handicapped riders, operation of special equipment to provide access for the handicapped will cause longer overall travel times and necessitates operator assistance.

Other Concepts in Service and Related Issues

School Buses

The use of school buses in providing service to disadvantaged groups has been considered by some as an untapped resource. There have been successful specialized operations involving the use of school buses. There are substantial problems involved with their use, however. Major limitations on their applicability, which vary from state to state are: a) the extent to which the use of school buses are restricted by statute or other restrictive covenant; b) a lack of

specific legislation or policy allowing non-school use of school buses; and c) requirements for special authorization, license or permit for use.[119] (Until recently, the State of Maryland had no specific legislation or policy dealing with the use of school buses during off-hours. However, legislation passed in 1977 [HB 393, Del. Ruben] authorizes counties and municipalities to establish a procedure for multipurpose transport of persons aged 60 or over in school buses as long as it does not conflict with transportation of school children).

Additional problems that have been encountered in the use of school buses for special transportation purposes have included Federal excise tax provisions on new bus purchases (considered burdensome by school bus contractors), difficulty in obtaining appropriate and affordable insurance provisions, concern over the use of public funds for other than school-related purposes (increased maintenance costs of buses), the lack of available time because of down periods and conflicting service schedules. Additionally, operating costs per vehicle mile (and costs per passenger) are quite high. It has been noted that "the high operating costs of the school bus vehicle becomes more expensive than buying new vehicles with smaller seating capacities and more favorable operating characteristics."[120] Finally, the disadvantaged traveler, often the elderly individual, is faced with a vehicle that is inappropriately designed to facilitate easy access and riding comfort. But where no other form of transportation for the disadvantaged exists, the use of school buses can be a viable alternative.

Volunteer Transport

The use of volunteers in providing transportation to the disadvantaged is not a new concept. Social service programs have employed volunteer drivers for quite some time in efforts to reduce program costs and offer the opportunity

to render services to the community. Minor incentives or rewards to volunteers have helped to offset costs in the use of the vehicle, or in the case of an agency vehicle, the loss of their time. However, escalating fuel and maintenance costs have reduced the willingness of volunteers to offer the services of their vehicle. Possible measures to provide continued incentives to encourage volunteer participation might include free auto registration, access to low priced fuel and reductions in maintenance and insurance costs.[121] While the use of volunteers may constitute a tremendous resource for reducing manpower needs, the providers using volunteer services must expect to have to maintain a large pool of volunteers because of their uncertain continued availability.

Reduced Fares

While reduced fare programs are now commonplace, free fare transit options are not. As now required by Section 5(m) of the National Mass Transportation Act of 1974, any transit system received federal assistance under Section 5 (operating assistance) must offer fares to the elderly and handicapped during non-peak hours at an amount no greater than half the normal peak period fare for general riders. As more communities begin to receive Section 5 money, greater fare reductions for the elderly and handicapped will become the rule, not the exception, on major transit systems. However, the increased ridership achieved with a reduction of fares has not been substantial enough to compensate for the loss of revenues obtained from the disadvantaged riders prior to fare reduction. Various major transit systems have reported annual losses from 7 to 10 million dollars as a result.[122] Free fare transit options, while not widespread, offer tremendous travel incentives and increased opportunities for greater mobility to the disadvantaged.[123] The cost of offering such programs must be absorbed by the transit operation. Where costs are not prohibitive, the target popula-

tion manageable, and the financing resources available, such a scheme remains practical. One example is discussed in a subsequent section on case studies.

Reverse Commutation

Reverse Commutation is a service concept developed during the mid and late 1960's by the Office of Economic Opportunity in its efforts in the War on Poverty.[124] With the continuing decentralization of employment opportunities, OEO found it necessary to supplement established urban public transit systems with Federally-funded special transportation since those public transit systems failed to offer adequate transportation to enable inner city residents to reach suburban employment opportunities. While these access conditions for inner city workers have somewhat improved, there are still instances where reverse commutation is being employed though no longer under the aegis of OEO.

Mobility Clubs

Mobility Clubs or associations offer an additional framework for pooling resources and extending transportation services for the disadvantaged. One potential arrangement for the provision of transportation would involve senior citizens sharing the costs of reserved or subscription service for specified trip purposes and for regular trips. Another approach to the club concept is a volunteer-oriented seniors-helping-seniors approach requiring local group initiative for local agency sponsorship and organization. Under this scheme, seniors with automobiles or other available transportation offer these services to the less fortunate elderly. The seniors are then compensated by the sponsoring agency or by rider "contributions" which are within their means but which cover the basic operating costs of the provider. The mobility club concept holds promise for not only elderly travelers, but for rural or small town residents as well. Under another arrangement, volunteers on a rotating basis receive calls, register them, and arrange joint rides.[125]

Alternative Pricing Techniques

Alternative techniques in pricing and subsidization of available transportation services have been utilized for quite some time. An examination of changes in the level and nature of their application suggests additional ways in which special transportation needs can be met more effectively.[126] Provider-side subsidies are those in which the subsidy is paid directly to the transportation provider for offering certain specified services at fares which produce insufficient total revenues to cover the provider's cost. Provider-side subsidies have been employed extensively in the operation of public transit systems (in the form of capital and operating assistance). User-side subsidies are those intended for use by special-need groups who are permitted to purchase transportation vouchers at a price substantially below the market value. The users exchange these vouchers for transportation service, and the providers then redeem the vouchers from the public agency at rates agreed upon in advance. User-side subsidies have often been associated with the use of public transit or private contract transportation services by social service agencies who reimburse the costs for their clients. Continuing Federal investigation will further evaluate the relative merits of subsidy techniques and examine alternative arrangements to optimize service effectiveness and quality.

Specialized Service and System-Wide Approaches

Arguments concerning integrated versus segregated service systems continue. At one extreme, it has been argued that for the transportation needs of the disadvantaged (in this case primarily the elderly and handicapped) to be met effectively, a separate service system apart from conventional public transit is needed. Some disadvantaged individuals are opposed to this because they do not wish to receive unique treatment and be separated from the rest of the public. Significant increases in cost have also been associated with segregated systems.

However, certain types of mobility limitations (severely handicapped, e.g.) necessarily limit the disadvantaged traveler's ability to use conventional public transit and require that a specialized system be utilized:

> "The consensus among those interviewed was that modifying regular commuter mass transit service will not fully meet the needs of invalids and the non-ambulatory elderly and handicapped, and that the preferred means of achieving the objective is through use of a combination of standard mass transit vehicles, specialized small vehicles, and demand-responsive service."[127]

At the other extreme, specializing the service on the conventional public transportation system, while better assuring the disadvantaged traveler of more equal access and mobility, is not without its problems. In order to comply with Federal regulations, all vehicles utilized by the disadvantaged would have to be specially equipped. This would address problems that would be encountered by a disadvantaged traveler if he were to transfer from a specially-equipped feeder vehicle to a public transit line-haul vehicle. However, such action would necessitate increased costs for the operator and possibly the users, which may result in increased fares (if appropriate subsidization was not available). This points to another issue, the retrofitting of existing vehicles versus new vehicle acquisition. The relative costs and benefits of each require a more thorough investigation:

> "Experience with the operation of specialized sources for the handicapped both in the U.S. and overseas suggests that these are acceptable and extensively used by handicapped patrons that they may be tailored effectively to the travel requirements of the handicapped population, and, finally, that the costs associated with their operation are significantly lower than those estimated for the modifications of standard public transit services."[128]

In some instances, the issue of service integration never occurs simply because there is an existing paucity of resources and services. This is often the case in rural areas where public transit is minimal or non-existant. As one study noted "with low population densities, the best way to go is to combine para-transit with transportation now being provided for social service

programs ... the combination of the two areas would provide better service for more small towners at lower overall costs."[129] Within these extremes of service systems fall a range of combinations in which various degrees of public and private carrier, para-transit and social service agency operations are interspersed. It is the continuing task of those involved with the provision of transportation service to assess the community's total transportation needs and develop the appropriate system for optimum, effective service.

Mobile Resource or Outreach Vans

These vans present an alternative to providing transportation to social services. With the use of resource vans, the social service, depending upon its exact nature, can be brought to the client. This concept holds a great deal of promise for application to rural areas and to programs with dispersed client groups.

Institutional Frameworks and the Provision of Transportation

Alternative approaches to institutional arrangements for the coordination and delivery of services is an important issue. No one group or governmental entity has developed expertise or exercised a display of leadership in the area. Mouchahoir noted that "... analysis indicated the social service centers have a lack of management, operational and planning experience in providing transportation service to clients, rather than a lack of funds to purchase more vehicles and hire more operators."[130] The Urban Mass Transportation Administration and the States have been hesitant to assume more heavily-involved roles in an area in which they feel the primary responsibility for and knowledge of the problem is best handled at the local level.

Indeed the successful examoles of more effective coordination and service delivery demonstrate a variety of administering institutional arrangements. The

nature of these arrangements has depended upon the character of the area (its geography, density, service needs, etc.), the degree of existing coordination, the ingenuity of the program directors and the nature of available resources. Nationally, there has been an increasing trend towards more active involvement by sub-state and county level governments with a designated social service agency of the latter often assuming the coordinative role. Local transit agencies, however, have also acted as community transportation brokers, functioning as the coordinative unit while identifying needs and providing and matching them with the appropriate resources.

While not all social service agencies feel it is to their clients' advantage to leave the provision of transportation to a non-program provider, a Central Maryland survey found that a majority of the agencies polled in the area expressed a need for a central agency to plan, provide and monitor transportation services.[131] This scheme has proved to be quite successful in Delaware. In 1974, the Delaware Authority for Specialized Transportation (DAST) was established as a public, non-profit organization designed to serve the State's elderly and handicapped residents who could not use regular mass transit. DAST operates by contracting with various public and private social service agencies to provide transportation services on a statewide basis. State social service agencies refer clients to DAST for transportation, there being no charge to clients for the service.[132]

Table 12 provides brief descriptions of a variety of service efforts presently underway across the nation noting the type of service offered and the framework for its provision.

In the next section, the potential applications of various para-transit systems and administrative arrangements in alleviating the mobility problems of disadvantaged groups in various portions of the State of Maryland are discussed. The discussion is meant to be suggestive and exploratory and not to recommend courses of action.

Table 12
Major Programs Providing Specialized
Transportation Service in the United States

Program	Characteristics
Delaware Authority for Specialized Transportation	Statewide authority coordinates statewide special transportation services provided to elderly and handicapped (social service programs) via social service agency and DAST vehicles plus contract taxi services.
State of Pennsylvania	Statewide free fare transit provided to elderly, financed by revenues from State lottery with transportation provided by participating public transit systems (taxis, social service agencies and dial-a-ride services excluded).
Montgomery County, Pennsylvania	Once weekly free fare, dial-a-ride transportation to the elderly and handicapped for various sections of the county.
Cape May County, New Jersey	County Department of Transportation coordinates all existing and proposed transportation services including most of social service program transportation, additionally, free fare rides are provided on extensive fixed-route, fixed-schedule with use of school buses for the elderly.
Transportation Renumeration and Incentive Program, West Virginia	Extensive operation in which State Department of Welfare operates statewide system for low income, elderly and handicapped persons involving provision of user-side subsidies, extension and improvement of existing services and support of innovative demonstration projects; operators of existing transit services enter into service agreements meeting State insurance and safety regulations; users are provided with subsidies in the form of tickets which authorized operator is reimbursed for by State; postal bus demonstration combining mail and package delivery with passenger travel is being tried.
Appalachian Ohio Regional Transit Association	Originally started by several Community Action groups, now a non-profit, private transit association providing transportation to area wide social service agencies; intends to link with public transit via feeder service.

Table 12 (Con't)

Program	Characteristics
Neighborhood Transportation Project, Cleveland, Ohio	Metropolitan transit agency provides specialized small bus transit service for the elderly in neighborhoods where regular transit service is inadequate.
Westport Transit District, Westport, Connecticut	Transit agency acts as community transportation broker to coordinate, plan, aid in providing, and monitor provision of transportation service to community; totally integrated system combines shared-ride taxi service and other para-transit service to conventional scheduled bus service with feeder service to commuter trains; offers demand-responsive special need transportation services to disadvantaged on a subscription basis.
State of Rhode Island	Statewide free-fare demand-responsive transportation provided to elderly by state-operated Senion Citizens Transportation, Inc., plans to coordinate use with the handicapped.
Chattanooga, Tennessee	City's Human Services Department operates transportation service for integrated system of sixteen social service programs under OMB experimental integrated Grant Administration program.
Valley Transit District, Naugatuck, Connecticut	Employs use of computerized Fairtrain credit and fare-collection system in providing comprehensive public services transportation for disdavantaged plus charter, contract and general ridership services; eligible riders employ use of coded credit card which registers trip and fare and sends monthly statement to the user.
Danville, Illinois	Subsidization in the form of tickets is provided directly to the users of taxi services; no public transit available.
Older Adults Transportation Services, Missouri	Rural (statewide) advance-reservation demand-responsive transportation system for the elderly (primarily for social service trips); Sponsored by State Office on Aging.
Portland, Oregon	Integrated service system for medium sized metropolitan area involves transit company operation of a special demonstration service for elderly and handicapped (being integrated with the regular transit system); specialized service will also be coordinated with social services and taxi transportation; credit card collection and computer billing system is utilized.

Table 12 (Con't)

Program	Characteristics
San Francisco, California	Reverse-commutation subscription service from central city to outlying employment areas contracted by several groups of travelers when it was found that existing public transit from central city to suburbs was inadequate.
Marin County, California	Transit agency, senior citizen and volunteer groups sponsor the combined fixed schedule, advance reservation elements of this transportation system for the elderly, handicapped and ill; demand-responsive van service is augmented by a large volunteer driver pool.
Supplemental Transportation Project, San Diego, California	Combined fixed-route and demand responsive system designed to serve a Model Cities area with emphasis on the elderly and handicapped; provides transportation for variety of social service needs including medical, nutrition and commodity delivery.

Source: Compiled by the Maryland Department of State Planning.

The Potential Application of Transportation Alternatives to Various Portions of Maryland

It is beyond the scope of this report to analyze with great detail and certainty, the viability (feasibility, cost-effectiveness, service quality) of each of the various paratransit operations noted previously as they could be applied in the State of Maryland. We can suggest possible scenarios which link particular system characteristics with mobility needs of various portions of the State. Observations of suitability have been formed by a cursory review of the types of systems in operation in other areas of the United States. A more detailed analysis is needed of the type and degree of resources available for each area, the expertise of existing service providers, a realistic perspective of cost and revenue limitations and the existing administrative-governmental framework within which new systems function. This could provide some insights into the successful application of these systems in Maryland.

It is important to note several limitations. First, optimum utilization of existing resources is of prime importance. Existing social service providers must share vehicles, driver costs, etc. where possible. Inclusion and greater encouragement of the private sector to provide service is essential. Second, much of the responsibility for innovation in service delivery and management will be up to the local group or community. Special systems, though designed to fulfill Federal and State requirements, will have to be tailored to the particular "personality" of the area and to the profile of its mobility needs. Thirdly, it will be up to the State, the county or community or the individual service provider to assume an aggressive stance in identifying funding resources and pursuing Federal dollars. Development of special and rural systems is still a relatively new area and unexplored territory involving innovative approaches is a prime candidate for demonstration monies or con-

tinued financial support if a project shows promise. Tieing together the various sources of Federal and State dollars remains an ultimate challenge for the local operator, however.

Area-Specific Applications to Maryland

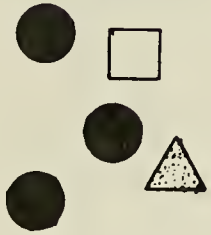
Certain small urban areas of the State have some form of existing public transportation and often serve as a center of county-wide taxicab activity. Public and private social service agencies are often located in these centers and employ the use of agency vehicles to serve their client populations. Coordinating these existing resources could go a long way in meeting the area's (county and town) public and special transportation needs. This would probably require that the municipal or county Transportation Authority would be responsible for overall planning and coordination of the system and hence would act as the 'community transportation broker'. Social service agency needs could be fed into the system and met with the use of existing public transportation, subsidized taxi operations and the use of specially-equipped human service agency vans. The system could be a regular route in denser areas and have ancillary demand-responsive or intermittant service characteristics for outlying areas. Financing arrangements would have to be detailed for the support of a probable central information service and core staff although a variety of administrative alignments could be employed (see Figure 15). Once again, identification and inclusion of private carriers, particularly taxicab companies, could play a prominent role in meeting area mobility needs. Small urban centers (and their surrounding county) such as Hagerstown, Cumberland, Salisbury, Elkton, Annapolis and Cambridge could investigate this scheme within the framework of ongoing transit development planning.

In large metropolitan areas, extensive public transportation systems already exist for the general public. Meeting special transportation needs for

FIGURE 15

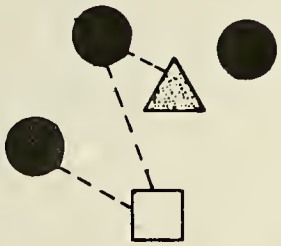
Administrative Arrangements for the Provision of Public and Specialized Transportation

NO COORDINATION



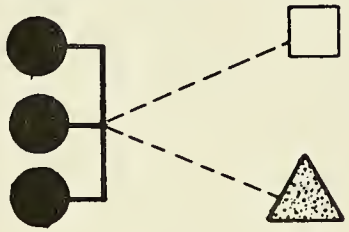
No coordination. Agencies use own resources.

PURCHASE OF SERVICE



Use of chits, tokens or subsidy for client transportation on public/private systems for program purposes

SPECIAL AUTHORITY



Special social service authority or cooperative agreement coordinates all transportation needs of social service agencies, includes purchase of service and existing resources.

INTEGRATED SYSTEM / BROKERAGE

Integrated Public and Special Systems. Transit Authority acts as broker-does planning, service provision and management. Formal working agreement with private carriers who provide a portion of dedicated service.

LEGEND

- ● HUMAN SERVICES AGENCY
- □ PRIVATE PROVIDER (Taxi, Limosine Service, etc.)
- △ PUBLIC TRANSIT AUTHORITY

SOURCE: Maryland Department of State Planning

these areas entails retrofitting and modification of existing equipment or establishing a separate specialized system or elements of both. In Maryland's metropolitan areas of Baltimore and Suburban Washington, some modification of existing conventional vehicles has occurred. In Baltimore, a specialized bus system is already scheduled to begin operation in the spring of 1977.[133] Whether specialization or modification occurs, the use of non-conventional forms of public transportation (i.e., paratransit), can offer less expensive, more-efficient alternatives for serving formerly neglected or untapped service groups. The use of small buses, vans and subsidized private carriers and volunteer drivers (more characteristics of an urban or suburban environment) could serve special need groups such as the elderly and handicapped, and could extend service to areas with little or no transit service (either as dedicated service or as a feeder operation). Applicability of paratransit operations as well as alternative frameworks for the coordination of public, private and institutional transportation should be subjects of serious study by agencies concerned with metropolitan transportation problems.

In rural areas of the State where public transportation does not exist and private carriers are few, meeting the transportation needs of special groups (mostly social service clients or autoless households) is generally left to human service agencies. Close coordination of agency vehicles, where possible, becomes essential if the disadvantaged are to be adequately served. Community level approaches to transportation problems must be tailored to the unique characteristicts and population of the area. In Garrett County, for example, a small bus system is so designed as to serve the general public in different sections of the county with regular service (on designated days) yet also serve special need and social service groups on designated days for designated appointments. This so called 'piggy-backing' is essential where resources are few and

travel needs are varied. More extensive use of existing private carriers in rural areas could greatly enhance mobility alternatives for rural residents while supporting a local industry (taxicab operations, for example).

In certain portions of the State, several social service organizations possessing significant expertise in the provision of special transportation service provide extensive intra and intercounty operations. Agencies operating in Maryland's upper and lower Eastern Shore areas are a prime example. Combining their efforts with existing but usually infrequent common carrier service, limited taxi operations, volunteer drivers and parapostal service (combined mail and light freight delivery with passenger transport) could result in the creation of a regional public and specialized transportation system. The potential for development of such a system (which could probably be instituted in Southern Maryland, as well) could be thoroughly studied under the ongoing transit development planning process. It is within this framework that questions concerning priorities of need, overall management framework and responsibilities and sources of funding could be investigated.

FOOTNOTES

[1]Amedee, George and Saltzman, Arthur, "Demand Responsive Transportation for the Elderly, Handicapped and Poor," American Institute of Planners, Transportation Technical Department Workshop Proceedings, March 1975, p. 28.

[2]Paaswell, Robert, "Disadvantaged Travelers - Who Are They," VIEWS-AIP Transportation Department Newsletter, V. II, No. 3, September 1975, pp. 12-14.

[3]Koutsopoulous, K.C. and Schmidt, C.G., "Mobility Constraints of the Carless," Traffic Quarterly, V. 30, No. 1, January 1976, pp. 67-69.

[4]Ibid, pp. 69-82.

[5]Institute of Public Administration (IPA), Transportation for Older Americans: A State of the Art Report, Washington, D.C., April 1975, pp. 9-10.

[6]U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Consumer Income, Money Income in 1973 of Families and Persons in the United States, Advance Report, July 1974, Table 9, p. 11.

[7]IPA, p. 15.

[8]Koutsopoulous and Schmidt, p. 73.

[9]Ibid.

[10]IPA, p. 14.

[11]U.S. Department of Commerce, Bureau of the Census and the Federal Highway Administration, Nationwide Personal Transportation Needs Survey: 1969-1970, preliminary results, Washington, D.C.

[12]Stein, Martin, Maryland Department of Transportation, Division of Systems Planning and Development, Socio Economic Group, Transportation for the Elderly and Handicapped: A Statewide Assessment (DRAFT), November 1975, p. 9.

[13]From survey information supplied by Mr. Carl Ruskin, Baltimore City Department of Planning.

[14]IPA, p. 33.

[15]Stein, p. 10.

[16]IPA, p. 36.

[17]Nationwide Personal Transportation Needs Survey: 1969-1970.

[18]From survey information supplied by Mr. Carl Ruskin, Baltimore City Department of Planning.

[19]Health and Welfare Council of Central Maryland, Inc., Mobility Problems of Transportation Disadvantaged in Central Maryland (Background Materials), from survey information supplied by the Baltimore City Department of Planning, 1976, pp. 36-51.

[20]U.S. Department of Transportation, Urban Mass Transportation Administration, Urban Mass Transportation Act of 1964 and Related Laws, Washington, D.C., March 1976, p. 24.

[21]Stein, pp. 15-16.

[22]Ibid.

[23]Metropolitan, "Bi-State Aids Handicapped," March-April 1976, p. 36 and see U.S. Department of Transportation, Urban Mass Transportation Administration NEWS, September 28, 1976.

[24]Amedee and Saltzman, p. 28.

[25]Abt Associates, Inc., Travel Barriers: Transportation Needs of the Handicapped, U.S.D.O.T., 1969 and Transportation Systems Center, The Handicapped and Elderly Market for Urban Mass Transit, UMTA, October 1973.

[26]From information supplied by the Maryland Department of Transportation, Motor Vehicle Administration, June 1976 and April 1977.

[27]Health and Welfare Council of Central Maryland, Inc., p. 42; see also Abt Associates, 'Travel Barriers.'

[28]Abt Associates, Inc., Accessibility of the Metropolitan Washington, D.C. Public Transportation System to the Elderly and Handicapped, Executive Summary for U.S. Department of Transportation, February 1974, p. 2.

[29]Abt Associates, Inc., 'Travel Barriers.'

[30]Ibid.

[31]Office of Management and Budget, Statistical Policy Division, Statistical Reporter, November 1976, p. 68 and U.S. Bureau of Census, Money Income and Poverty Status of Families and Persons in the United States: 1975 and 1974 Revisions (Advance Report), Current Population Reports, Series P-60, No. 103.

[32]Paaswell, Robert E., "Problems of the Carless in the United Kingdon and the United States," prepared for the Organization for Economic Cooperation and Development, Department of Civil Engineering, State University of New York at Buffalo, New York, August 1972.

[33]Nationwide Personal Transportation Needs Survey: 1965-1970, U.S. Bureau of Census, Population Reports: General Social and Economic Characteristics, 1970.

[34]From Appalachia Magazine, April 1972 in "Revitalization of Small Communities: Transportation Options, V. 1, Vary Coates and Ernest Weiss, Second Year Final Report for U.S.D.O.T., Washington, D.C., December 1975; the impact of the energy and the fuel situation upon rural households is discussed more fully in latter report.

[35]Abt Associates, Inc., Transportation Needs of the Urban Disadvantaged, Draft Report for U.S.D.O.T., Federal Highway Administration, June 1972 and Amedee and Saltzman, "Demand Responsive Transportation, p.7.

[36]Coastes and Weiss, pp. 10-15.

[37]Ibid, p. 23.

[38]Ibid, p. 27.

[39]U.S. Department of Agriculture, Economic Research Service, Prelude to Legislation to Solve the Growing Crisis in Rural Transportation, February 1975, p. 173 for U.S. Senate Committee on Agriculture and Forestry.

[40]U.S. Department of Transportation, Office of the Secretary, Transportation and the Rural Community, Report on the First Workshop on National Transportation Problems, May 1974, p. 19.

[41]Committee on Community Development and the Domestic Council, 1976 Report on National Growth and Development, "Changing Issues for National Growth," February 1976, p. 21.

[42]Maryland Department of State Planning, Maryland Population Abstract 1950-1990, Table 18 - Historical and Projected Total Population 65 Years Old and Over: 1950-1990, p. 36.

[43]U.S. Bureau of the Census, Population Reports: Social and Economic Characteristics, State of Maryland, 1970.

[44]Disability is defined in 1970 Census Users' Guide, Part I, Bureau of the Census, October 1970, p. 104.

[45]Transportation Systems Center, The Handicapped and Elderly Market for Urban Mass Transit.

[46]This total is arrived at by multiplying a .53 factor times the State's total elderly population.

[47]Transportation Systems Center, op. cit.

[48]From information supplied by the Maryland Departments of Transportation and Health and Mental Hygiene (unpublished report, November 1974).

[49]U.S. Bureau of the Census, Census of Population and Housing 1970, 4th Summary Tapes, Maryland Department of State Planning.

[50]Census Bureau, Population Reports: Social and Economic Characteristics, 1970. A greater difference, in the geographic sense, between metropolitan and nonmetropolitan areas is offset by the large number of autoless households in Baltimore City.

[51]Urban Mass Transportation Administration, Transportation Problems of the Transportation Handicapped: Volume I - Transportation Handicapped Population, Definition and Counts, August 1976, pp. 25-53.

[52]Institute of Public Administration, Transportation for Older Americans: A State of the Art Report and Planning Handbook: Transportation Services for the Elderly; U.S. Department of Health, Education and Welfare, Transportation for Older Americans; Urban Mass Transit Administration, Transportation Problems of the Transportation Handicapped (4 Volumes); See also Brail, K., Hughes, J. and Arthur, C., Transportation Services for the Disabled and Elderly, Center for Urban Policy Research, Rutgers University, 1976, pp. 228.

[53]PL 88-365, 78 Stat. 302, 49 U.S.C. 1601 et. seq.

[54]PL 93-503, 88 Stat. 1565, 49 U.S.C. 1601 et. seq.

[55]PL 93-87, 23 U.S.C. §147.

[56]Ibid.

[57]Pl 93-643, 23 U.S.C.,§105.

[58]PL 91-518, 84 Stat. 1330, U.S.C. 3, 302 and PL 93-496, 88 Stat. 1527-28, U.S.C. 3, § 3,4,6.

[59]Federal Register, September 17, 1975, V. 40 n. 181, pp. 42976-42984.

[60]Federal Register, April 30, 1976, pp. 18234-18241.

[61]Ibid.

[62]Federal Register, V. 41 N.85, April 30, 1976, p. 18240 and also Sec. 16 of the Urban Mass Transportation Act of 1964 as amended.

[63]Federal Register, V. 41 N. 103, May 26, 1976, "Transportation Demonstration Grant Program," pp. 21505 - 21506.

[64]PL 93-112, 29 U.S.C. 794 Sec. 504.

[65]PL 93-29, Sec. 412.

[66]Ibid.

[67]PL 89-97, Title 1, Part 2, Sect. 121(a) 79 Stat. 343.

[68]PL 93-647, Part A, Sect. 2, 88 Stat. 2337.

[69]PL 92-419, 86 Stat. 657.

[70]Baltimore Regional Planning Council and Maryland Department of Transportation, FY 76 and FY Unified Work Programs.

[71]Metropolitan Washington Council of Governments, FY 77 Unified Work Program for the Washington Metropolitan Area, Unified Transportation Planning Program.

[72]Mass Transit Administration, Status Reports, December 1974, July 1975, December 1976.

[73]Memorandum from Mass Transit Administration, April 1976.

[74]Health and Welfare Council of Central Maryland, Inc., Mobility Problems of Disadvantaged Persons in Central Maryland (Background Materials), 1976.

[75]Ibid.

[76]Many of the Baltimore City Survey findings are included in the Health and Welfare Council Reports, refer to pp. 36-54 for a review.

[77]Ibid, see pp. 103-118.

[78]Metropolitan Washington, FY 1977 Unified Work Program.

[79]Ibid.

[80]Health and Welfare Council p. 86.

[81]Maryland Office on Aging, Specialized Transportation of the Elderly in the State of Maryland, September 1975, 38 pp.

[82]Metropolitan Washington Council of Governments, Directory of Special Transportation Services, June 1975, 57 pp.

[83]Metropolitan Washington, FY 1977 Unified Work Program.

[84]Health and Welfare Council of Central Maryland, p. 6.

[85]From information supplied by the Frederick County Commission on Aging, July 1976.

[86]Area Plan for Programs on Aging - FY 1976, Central Maryland Area Agency on Aging, pp. 20-22.

[87]Governor Marvin Mandel's Executive Mandate created and outlined the responsibilities of the Interagency Committee for Specialized Transportation, April 1975.

[88]From information obtained from the Interagency Committee for Specialized Transportation.

[89]Article 41, Section 208G, Maryland Code.

[90]National Mass Transportation Assistance Act of 1974.

[91]Maryland Department of Transportation, Directions.

[92]Maryland Department of Transportation, Mass Transit Administration, New Specially Reduced MTA Fares for the Handicapped.

[93]Maryland Department of Transportation, Mass Transit Administration, Memorandum of Understanding, with Maryland Disabled in Action, October 1974.

[94]Lutheran Social Services of Maryland, Inc., Draft Final Report, Project Design: Specialized Public Transportation System for the Baltimore Area, March 5, 1976, prepared for the Maryland Department of Transportation.

[95]The Washington Informer, "Good News for Senior Citizens,", May 13, 1976.

[96]Mass Transit Administration, Status Report.

[97]Information obtained in a phone conversation with the Anne Arundel County Economic Opportunity Commission.

[98]Maryland Department of Transportation, Outline: First Year Study Design, Non-Metropolitan Areas Systems Planning Studies, November 1976.

[99]Howard County Office of Planning and Zoning, Howard County Public Transit Study, April 5, 1974.

[100]Metropolitan Washington Council of Governments, FY 1977 Unified Work Program.

[101]This carrier is identified as the Community Concern Corp. of Baltimore.

[102]From information supplied by the Maryland Public Service Commission.

[103]Coates and Weiss, p. 3.

[104]Brooks, Suanne, "Coordinated Public Transportation Services: The Problem from A Social Services Viewpoint," paper delivered at the Transportation Research Board's 55th Annual Meeting, January 20, 1976 and see also Southeastern Federal Regional Council and Project SHARE, Transportation Authorities in Federal Human Services Programs, January 1976.

[105]Brooks, Ibid.

[106]Coates and Weiss, pp. 46-47.

[107]Urban Mass Transportation Act of 1974 (as amended), Section 16.

[108]"Transportation Demonstration Grant Program," Federal Register.

[109]A Federal Regional Council meeting dealing with rural transportation problems in Maryland was held in March 1977.

[110]Public Transit Report, February 14, 1977, Vol. 5, No. 4, February 28, 1977, Vol. 5, No. 5 and March 16, 1977, Vol. 5, No. 6.

[111]Select Committee on Aging, Subcommittee on Federal, State and Community Services, Senior Transportation - Ticket to Dignity, Report delivered to House of Representatives, May 20, 1976.

[112]Ibid.

[113]Ibid.

[114] The Washington Post, Friday, May 20, 1977, "Buses Approved for Disabled." Department of Transportation, Urban Mass Transit Administration, NEWS, July 27, 1976 and Metropolitan, "Transbus: A Status Report," V. 72, N. 4, pp. 30-32.

[115] Michigan Department of State Highways and Transportation, Michigan DART Program: Status Report, February 1976; Kadesh, Eileen, "A Comparative Evaluation of System Performance and Economics of Demand-Responsive Transportation Experiments in Two California Cities: Richmond and Santa Barbara," prepared for Sixth Annual Conference on Demand-Responsive Transportation Systems, March 15-17, 1976.

[116] Hershey, William, Huron River Group, Inc., "Dial-A-Ride's Impact on Transportation Energy Consumption in Small Cities," February 1976.

[117] Department of Transportation, Urban Mass Transit Administration, NEWS, July 19, 1976 for a discussion of the DAST program (Delaware Authority for Specialized Transportation) and NEWS, November 5, 1976 for a discussion of the COTPA experiment (Central Oklahoma Transportation and Parking Authority).

[118] U.S.D.O.T., UMTA, NEWS, July 27, 1976.

[119] "Senior Transportation: Ticket to Dignity," p. 43 and U.S.D.H.E.W., Planning Handbook: Services for the Elderly, Section IX, pp. 10-14.

[120] "Senior Transportation: Ticket to Dignity", p. 44.

[121] Ibid, pp. 40-42.

[122] Ibid, p. 48.

[123] See Transit Fare Prepayment, prepared by the Huron River Group, Inc. for U.S. D.O.T., Urban Mass Transportation Administration, August 1976.

[124] Amedee and Saltzman, pp. 32-34.

[125] Yukubousky, Richard and Fichter, Donn, New York State Department of Transportation, Mobility Club: A Grass Roots Rural and Small Town Transport Concept, August 1974, paper presented to 54th Annual Meeting of the Transportation Research Board.

[126] Kirby, Ronald F. and McGillivrary, Robert G., Alternative Subsidy Techniques for Urban Public Transportation, the Urban Institute, Washington, D.C., October 1975.

[127] UMTA, Transportation Problems of the Transportation Handicapped, V. 2 - Roles of Government and the Private Sector in the Provision of Mobility Systems for the Transportation Handicapped, August 1976, p. 4.

[128] Ibid, p. 13.

[129] Coates and Weiss, p. 33.

[130] Mouchahoir, George, "Management of A Transportation System for the Disadvantaged," Traffic Quarterly, p. 291.

[131]See Health and Welfare Council.

[132]U.S.D.O.T. NEWS, July 19, 1976; and WILMAPCO (Wilmington Metropolitan Area Planning Council) SCOPE.

[133]Baltimore Evening Sun, "Special Buses Due for Disabled," April 15, 1977.

GLOSSARY AND ACRONYMS

1. Accessibility - capability of being able to enter or approach.
2. Action Plan - an MDOT document which describes the processes for planning and provision of transportation services and facilities in Maryland from project construction; the Action Plan emphasizes the points in the process where full consideration is to be given to social, economic and environmental affects; importance is given to compatibility with overall development plans and realistic financial assessments.
3. Disability - defined by the U.S. Bureau of Census in terms of employment status - that is, did the individual have a health condition or disability which limited the kind or amount of work they could do at a job and whether their health prevented them from doing any work at all; tabulated in 1970 for persons aged 16 to 64.
4. HEW - U.S. Department of Health Education and Welfare.
5. MDOT - Maryland Department of Transportation.
6. Metropolitan Area - Those areas of the State defined as Standard Metropolitan Statistical Areas by the U.S. Bureau of Census.
7. Mobility - capability of movement from place to place.
8. Modal Choice - preference for a particular manner of travel when faced with more than one option (i.e., bus travel preferred to auto use, taxi use preferred to bus use).
9. Mode - manner of travel (e.g., bus, taxi, private auto, rapid rail, etc.).
10. MPO - Metropolitan Planning Organization; a designated regional planning body for Federal programs; the Baltimore region's MPO is the Regional Planning Council, in the Washington area it is the Council of Governments.
11. MTA - Mass Transit Administration; one of five modal administrations within the Maryland Department of Transportation.
12. Non-Metropolitan - All other areas of the State not included in U.S. Bureau of Census Standard Metropolitan Statistical Areas.
13. NPO - non-profit organization.
14. OHD - Office of Human Development of the Department of Health, Education and Welfare.
15. Paratransit - transportation options that fall between private automobiles and conventional public transit service (e.g., dial-a-bus, shared-ride taxis, subscription service, specially-equipped vehicles) which offer more flexible approaches to special service needs (line-haul feeder service, limited mobility groups, off-peak hour operation, etc.).
16. Peak hour - times at which during the day, travel volumes are the greatest; usually during the work commutation periods of 6-9 A.M. and 4-6 P.M.; off or non-peak periods are those with reduced or infrequent levels of travel such as late night and very early morning.

17. Poverty level - income level based upon an index developed by the Federal Interagency Committee in 1969 which takes into account such factors as family size, number of children, place of residence and money income; poverty level is based upon an economy food plan designed by the Department of Agriculture for emergency or temporary use when funds are low; the definition assumes that a family is classified as poor if its total money income amounts to less than approximately three times the cost of the economy food plan; an annual update occurs.

18. Standard Metropolitan Statistical Area - generally speaking, an SMSA consists of a county or group of counties containing at least one city having a population of 50,000 or more, plus adjacent counties which are metropolitan in character and economically and socially integrated with the central city.

19. TDP - Transit Development Program or Plan: a county or community-wide assessment and plan for comprehensive transit needs including an elderly and handicapped element; this plan is required so that a community may be eligible for Section 16(b)(2) program funds.

20. TIP - Transportation Improvements Program; a comprehensive listing of all transportation capital improvement projects in the entire metropolitan region to be accomplished with Federal, State and local dollars; project priorities, accurate cost estimates and integration within the overall planning process must be covered.

21. Transbus - an UMTA prototype transit bus which incorporates the latest technology in safety, comfort and efficiency; primary consideration in the continuing research and design of this vehicle is its full accommodation of elderly and handicapped travelers.

22. Transit-dependent - those who are able to travel without difficulty (in the physical sense) but for whom public transportation is the only mobility alternative.

23. Transportation disadvantaged - while there are a variety of interpretations, generally those persons considered transportation disadvantaged are those whose adequacy and quality of transportation service is inferior to that of the general population and are limited in their mobility by constraining personal and environmental factors.

24. TSM - Transportation Systems Management element - a plan designed to meet the short-range transportation needs of urban areas through efficient use of existing facilities; possible study areas include exclusive transit lanes, car pools, bikeways, parking management strategies, etc.

25. UMTA - Urban Mass Transportation Administration of the U.S. Department of Transportation.

26. UTPP - Unified Transportation Planning Program - an effort to provide continuity to all public transportation planning activity in a region; the UTPP product, the Unified Work Program, is implemented through a continuing, comprehensive and cooperative transportation planning process involving Federal, State, Regional (MPO) and local planning bodies.

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